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In re ▶Emert◀ (CA FC) 44 USPQ2d 1149

In re ▶Emert◀**U.S. Court of Appeals Federal Circuit
44 USPQ2d 1149**

Decided September 18, 1997

No. 96-1559

Headnotes**PATENTS****1. Patentability/Validity -- Anticipation -- Double patenting (§ 115.0708)****Patentability/Validity -- Obviousness -- In general (§ 115.0901)**

"Two-way" test for obviousness-type double patenting rejection, in which court examines each claim of application and issued patent to determine whether it is obvious variant of its counterpart rather than just examining application claim for patentable distinctiveness from patent claim, applies in situation in which second-filed application issues first due to unjustified delay by Patent and Trademark Office in prosecution of earlier filed application; "one-way" test for obviousness-type double patenting, in which court looks only to see if pending application claims are patentably distinct from issued patent, applies where PTO action does not dictate rate of prosecution.

2. Patentability/Validity -- Anticipation -- Double patenting (§ 115.0708)

Patentability/Validity -- Obviousness -- In general (§ 115.0901)

"One-way" analysis is proper test for rejection of application on ground of

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obviousness-type double patenting, since applicants received numerous time extensions in various filings during prosecution of application, since applicants waited six months and twice filed substantially similar continuation applications after initial obviousness rejection, and did not make substantive response to Patent and Trademark Office for more than two years, and since applicants thus had significant control over rate of prosecution of application, and took actions that had direct effect on rate of prosecution.

3. Patentability/Validity -- Anticipation -- Double patenting (§ 115.0708)**Patentability/Validity -- Obviousness -- Relevant prior art -- Particular inventions (§ 115.0903.03)**

Application claims for oil-soluble dispersant useful as oil additive comprising product of particular reaction mixture is prima facie obvious over claims in patent for dispersant, comprised of combination of two compounds, that issued to applicants from later-filed application, since, in claims of patent and application, compounds at issue contain just three slightly different limitations, and only limitation in application that is slightly broader than invention of patent is molecular weight of polymer starting material, and since applicants argue that patent and application stand in combination/subcombination relationship, thus effectively conceding that differences between claimed compounds are not material and would have been obvious to person of ordinary skill in art.

Case History and Disposition:

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Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences.

Patent interference no. 103,304 between Jack Emert and Robert D. Lundberg, application no. 07/250,887, and Christiaan D. M. Beverwijk, Feike De Jong, and Peter Sant, patent no. 4,873,004. From rejection of application claims 1-5 and 43-67 absent terminal disclaimer, Emert and Lundberg appeal. Affirmed.

Attorneys:

Lawrence F. Scinto and Dominick A. Conde, of Fitzpatrick, Cella, Harper & Scinto, New York, N.Y.; Kenneth R. Walton and Harvey L. Cohen, of Exxon Chemical Co., Linden, N.J., for appellants.

Scott A. Chambers, associate solicitor, Nancy J. Linck, solicitor, Albin F. Drost, deputy solicitor, and Craig R. Kaufman, associate solicitor, U.S. Patent and Trademark Office, for Commissioner of Patents and Trademarks.

Judge:

Before Mayer, Michel, and Rader, circuit judges.

Opinion Text

Opinion By:

Rader, J.

Jack Emert and Robert D. Lundberg (collectively Emert) appeal the rejection of claims 1-5 and 43-67 of application No. 07/250,887 ('887 application). The United States Patent and Trademark Office's Board of Patent Appeals and Interferences (Board) rejected Emert's contested claims for obviousness-type double patenting. Recognizing that the Board applied the correct test and reached the proper result under the correct standard of review, this court affirms.

I.

This case arises from an interference between Emert's '887 application and Beverwijk et al.'s U.S. Patent No. 5,873,004. Beverwijk conceded that Emert was the first to invent the subject matter of the interference. Rather than claim priority, Beverwijk asserted that obviousness-type double patenting should prevent Emert from gaining a patent. The Administrative Patent Judge denied Beverwijk's motion for judgment. On appeal, the Board reversed the APJ and rejected Emert's claims in the absence of a terminal disclaimer. Specifically, the Board held that Emert's undue delays in prosecution caused the '624 patent to issue first. Therefore, the Board employed a one-way obviousness analysis comparing the application with the '624 patent. Under this analysis, the Board denied issuance to Emert's application. Instead, the Board required Emert to file a terminal disclaimer limiting his patent term.

The application and patents involved in this action disclose polymer dispersants. These dispersants, when added to motor oil, keep engines clean by preventing particles from settling on engine surfaces. In July 1985, Emert made the first filing of importance at the United States Patent and Trademark Office (PTO) for this case. At that time, Emert filed an application, assigned to Exxon, that later matured into U.S. Patent No. 4,863,624 ('624 patent). This patent claims:

1. An oil soluble dispersant mixture useful as an additive comprising:

(A) from about 10 to 90 weight percent of a first dispersant comprising (a) a first hydrocarbyl substituted C_4 to C_{10} monounsaturated dicarboxylic acid producing material formed by reacting a first olefin polymer of C_2 to C_{10} monoolefin having a number average molecular weight of about 1500 to 5,000 and a first C_4 to C_{10} monounsaturated acid material, said first

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acid producing material having an average of 1.05 to 1.25 dicarboxylic acid producing moieties, per molecule of said first olefin polymer present in the reaction mixture used to form said first acid producing material, and (b) a first nucleophilic reactant selected from the group consisting of amines, alcohols, amino-alcohols and mixtures thereof; and

(B) from about 90 to 10 weight percent of a second dispersant comprising (a) a second hydrocarbyl substituted C_4 to C_{10} monounsaturated dicarboxylic acid producing material formed by reacting a second olefin polymer of C_2 to C_{10} monoolefin having a number average molecular weight of about 700 to 1150 and a second C_4 to C_{10} monounsaturated acid material, said acid producing material having an average of 1.2 to 2.0 dicarboxylic acid producing moieties, per molecule of said second olefin polymer present in the reaction mixture used to form said second acid producing material, and (b) a second nucleophilic reactant selected from the group consisting of amines, alcohols, amino-alcohols and mixtures thereof.

In short hand, the '624 patent claims: "An oil soluble dispersant mixture useful as an additive comprising: [A and B]." Emert added component B to his disclosure as part of a continuation-in-part application filed on September 9, 1987. In September 1989, the '624 patent issued to Emert and two other inventors.

On October 16, 1986, Emert filed the first of a series of applications, also assigned to Exxon, that became the contested '887 application. In July 1987, the PTO rejected all claims of this first application for obviousness. Rather than respond to the obviousness rejection, Emert waited six months -- the maximum period -- then abandoned that first application and filed a substantially identical continuation application. Again, in March 1988, the PTO rejected this continuation for obviousness. Again Emert did not respond to the merits of the rejection, but waited the maximum six-month period and filed still another continuation. This second continuation -- the '887 application -- was again substantially identical to the original filing.

In November 1988, the examiner determined that the '887 application contained multiple inventions and imposed a restriction requirement. Emert responded to the restriction requirement on May 11, 1989. On July 28, 1989, the examiner rejected Emert's elected claims for obviousness. Emert finally responded to the merits on February 1, 1990. This action later ensued. The '887 application claims:

An oil soluble dispersant useful as an oil additive comprising the product of a reaction mixture comprising:

(a) a hydrocarbyl substituted C_4 to C_{10} monounsaturated dicarboxylic acid producing material formed by reacting olefin polymer of C_2 to C_{10} monoolefin having a number average molecular weight of about 700 to 1200 and a C_4 to C_{10} monounsaturated acid material, said acid producing material having an average of about 1.3 to 1.8 dicarboxylic acid producing moieties, per molecule of said olefin polymer present in the reaction mixture used for forming said acid producing material; and

(b) a nucleophilic reactant selected from the group consisting of amines, amino-alcohols and mixtures thereof.

In short hand, the '887 application claims: "An oil soluble dispersant useful as an oil additive comprising the product of a reaction mixture comprising: [B₁]." As to the relation between B and B₁, the dispersant claimed in the '624 patent [B] has a molecular weight of 700-1150 compared with 700-1200 in B₁ of the '887 application. The '624 patent's B also has a functionality ratio of 1.2-2.0 compared with 1.3-1.8 in B₁ of the '887 application. Emert claims that these very slight differences minimize interactions with other oil additives.

On appeal, Emert claims the Board made numerous errors in rejecting the claims for obviousness-type double patenting. First, Emert argues that the Board erred by declining to use a *two*-way obviousness-type double patenting analysis. Specifically, Emert faults the Board's finding that his delays slowed the prosecution of his application and caused the '624 patent to issue ahead of the '887 application. Second, Emert argues that even under a one-way analysis the Board erred because it did not provide a proper evidentiary basis for the finding of obviousness.

II.

A rejection under the doctrine of double- patenting is a legal conclusion to which this court gives complete and independent review. *See In re Goodman*, 11 F.3d 1046, 1052, 29 USPQ2d 2010, 2015 (Fed. Cir. 1993). The ultimate determination of whether a one-way or two-way analysis is appropriate is also a question for the court. However, the PTO made factual findings underlying its decision to use a one-way analysis. This court reviews these underlying factual

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findings for clear error. *See In re Caveney*, 761 F.2d 671, 674, 226 USPQ 1, 3 (Fed. Cir. 1985). In this case, the parties do not contest the applicable dates, but rather the conclusion to be drawn from those dates -- specifically, Emert's responsibility for delays in the prosecution of the '887 application.

III.

An obviousness-type double patenting rejection prevents applicants from extending their patent term beyond statutory limits where an application claims merely an obvious variant of the claims in a prior patent. *See Goodman*, 11 F.3d at 1052; *In re Vogel*, 422 F.2d 438, 441, 164 USPQ 619, 622 (CCPA 1970). Thus, this court examines the claims to determine whether one defines merely an obvious variation of the other. "Without a patentable distinction -- because the pending claim defines merely an obvious variation of the patented claim -- the patentee may overcome the double patenting rejection [only] by filing a terminal disclaimer." *Goodman*, 11 F.3d at 1052.

[1] This court has set forth two tests for obviousness-type double patenting rejections. In *In re Braat*, 937 F.2d 589, 593, 19 USPQ2d 1289, 1292 (Fed. Cir. 1991), the court applied a "two-way" patentability test. In that case, the applicant filed two applications, the second of which issued first due to the PTO's unjustified delays in the prosecution of the earlier filed application. This court also noted that the assignee could not have included the claims of the later-filed Dil application in the Braat application. * *Id.* at 593-94. Because "applications for basic and improvement patents should not be penalized by the rate of progress of the applications through the PTO, a matter over which the applicant does not have complete control," this court applied a two-way obviousness analysis. *Id.* at 593. Under the two-way analysis, this court examined each claim to determine whether it was an obvious variant of the other, rather than just examining the application claim for patentable distinctiveness from the patent claim. Although the Dil patent had issued before the pending Braat application, the court determined that the Dil claims were "patentably distinct from the subject matter defined by the claims of Braat." *Id.* at 594. Under this two-way analysis, therefore, this court reversed the Board's double patenting rejection.

In *Goodman*, this court set forth the "one-way" test for obviousness-type double patenting. In that case, the applicant chose to file a continuation for a broad claim while seeking early issuance of a narrow species claim. *Goodman*, 11 F.3d at 1053. This court noted that this election could gain the patentee "an extension of the term on a species when the broad genus later issued." *Id.* Therefore, because PTO action did not dictate the rate of prosecution, this court looked only to see if the pending application claims were patentably distinct from the issued patent. Under this one-way test, this court upheld the Board's double patenting rejection. *Id.* at 1053-54.

[2] In the instant case, Emert had significant control over the rate of prosecution of the application. The '887 application was filed on October 16, 1986, and initially rejected on July 21, 1987. Emert's subsequent actions had a direct effect on the pace of prosecution. First, Emert received numerous time extensions in various filings. More importantly, after the obviousness rejection in July 1987, Emert waited six months and twice filed a substantially similar continuation application. *See Goodman*, 11 F.3d at 1053 (noting that patentee's election to file a continuation in lieu of seeking an immediate appeal was evidence of patentee's control over the pace of prosecution). Emert did not make a substantive response to the PTO for more than two years after the original rejection. In the meantime, the '624 patent issued. During the critical three-year co-pendent period of the '887 application and the application for the '624 patent, Emert was responsible for the delays in prosecution.

IV.

Because Emert orchestrated the rate of prosecution for the two applications, this court applies a one-way analysis. Generally, the court must determine whether the claims in the application define an obvious variation of the claim in the earlier issued patent. *See, e.g., General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1278, 23

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USPQ2d 1839, 1843 (Fed. Cir. 1992). Even under this analysis, Emert argues that the invention claimed in the '887 application is not obvious in light of the '624 patent.

Herein, the parties disagree about the characterization of the relation between the two claims. Emert insists that the claims stand in a combination ('624 patent) and subcombination ('887 application) relationship. The PTO insists that the claims stand in a genus ('887 application) and species ('624 patent) relationship. Because a genus is *anticipated* by a species, the PTO argues that the invention claimed in the application is per se obvious. *See Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 USPQ 1264, 1271 (Fed. Cir. 1984) ("anticipation is the epitome of obviousness"). In spite of the parties' eagerness to conform the round-peg facts of the case into semantic, square holes, the critical inquiry remains whether the claims in the '887 application define an obvious variation of the invention claimed in the '624 patent. *See also* 3 Donald S. Chisum, *Patents*, Section 9.03[2][b] [iii] ("In situations in which the element or subcombination issues after the combination, the matter should be analyzed as one of a generic claim issuing after a later filed specific or improvement claim.").

[3] The '624 patent and the '887 application claim slightly different oil soluble dispersants. In the claims to the dispersant A + B, and B₁, B and B₁ contain 3 slightly different limitations: the average molecular weight of the starting polymer (700-1150 v. 700-1200), the average number of dicarboxylic acid producing moieties per molecule of the olefin polymer (1.2-2.0 v. 1.3-1.8), and the group of nucleophiles used in the reaction mixture (the '887 application omits alcohols from the Markush group). The only limitation in the '887 application that is slightly broader than the invention of the '624 patent is the molecular weight of the polymer starting material.

The Board treated the chemical mixtures B and B₁ as if they were equivalent or identical. Indeed, Emert argues that the patent and the application stand in a combination/subcombination relationship, effectively conceding that the differences between B and B₁ are not material and would have been obvious to a person having ordinary skill in the art. Hence the '887 application's claimed invention, an oil soluble dispersant comprising B₁, while not anticipated by the '624 patent due to the slight modification of three claim limitations, would have been prima facie obvious in light of the claim to the combination [A and B].

Without Emert providing rebuttal evidence, this prima facie case of obviousness must stand. Although Emert included some new subject matter that might have been patentable had it been separately claimed, the broad claims Emert sought in the '887 application would have been obvious in view of the prior art '624 patent. Absent some indication of unexpected properties, the combination [A and B] rendered B₁ obvious.

V.

In the absence of a terminal disclaimer, all of the claims at issue in the '887 application are unpatentable under the doctrine of double patenting. For the reasons stated above, this court affirms the decision of the Board.

AFFIRMED

Footnotes

Footnote * Similarly, this court noted that an applicant could not have added Braat's claims to the Dil application. *In re Braat*, 937 F.2d 589, 593-94, 19 USPQ2d 1289, 1292-93 (Fed. Cir. 1991). The applicants, Braat and Dil, both filed their applications before the 1984 Amendments to the Patent Act. After the 1984 Amendments, joint inventorship became possible even if "each [inventor] did not make a contribution to the subject matter of every claim of the patent." 35 U.S.C. Section 116(c) (1994). In this case, both the Emert-Lundberg ('887) application and the Emert-Waddoups-Lundberg ('624 patent) application came after the 1984 Amendments and could have been combined. Indeed the applicants did include the B dispersant within the '624 patent after its initial filing.

- End of Case -

All Other CasesIn re Braat (CA FC) 19 USPQ2d 1289 (6/28/1991)

In re Braat (CA FC) 19 USPQ2d 1289

In re Braat**U.S. Court of Appeals Federal Circuit
19 USPQ2d 1289**

Decided June 28, 1991

No. 90-1470

Headnotes**PATENTS****1. Patentability/Validity - Anticipation - Double patenting (§ 115.0708)**

Board of Patent Appeals and Interferences correctly found that rejected claims for optical record carriers are merely obvious variations of invention described by dependent claims of commonly-assigned prior patent, since only difference is omission of requirement in patent claims of information areas having side walls which are angled at particular angle, and omission of such limitation is not unobvious modification, but board did err by applying only "one-way" patentability determination and by failing to determine whether patented claims are patentably distinct from invention described in rejected claims, since such "two-way" determination is necessary in this case in order to sustain rejection for obviousness-type double patenting; patent claims are patentably distinct, since nothing in rejected claims refers to any angling of side walls of information areas, much less specific angles recited in patent claim.

2. Patentability/Validity - Anticipation - Double patenting (§ 115.0708)

Purpose of rule against double patenting is to prevent unjustified timewise extension of right to exclude that is granted by patent; thus, only if extension of patent right is unjustified is double patenting rejection appropriate, and there are situations where extension is justified.

Case History and Disposition:

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Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences.

Application, serial no. 569,546, filed Jan. 10, 1984, by Josephus J. M. ▶Baat◄ (record carrier with optically readable phase structure and apparatus for reading); U.S. Philips Corp., real party in interest. From decision affirming rejection of claims, applicant appeals. Reversed.

Attorneys:

Jack E. Haken (Algy Tamoshunas and John F. Moran, on brief), Tarrytown, N.Y., for appellant.

Jameson Lee, associate solicitor (Fred E. McKelvey, solicitor, with him on brief), Arlington, Va., for appellee.

Judge:

Before Nies, chief judge, and Rich and Clevenger, circuit judges.

Opinion Text

Opinion By:

Rich, J.

Baat appeals from the May 30, 1990 decision of the United States Patent and Trademark Office (PTO) Board of Patent Appeals and Interferences (Board). Appeal No. 90-0971, affirming the rejection of claims 8-10, 13, and 15-17 of application Serial No. 569,546 (Baat), filed January 10, 1984, entitled "Record Carrier with Optically Readable Phase Structure and Apparatus for Reading," on the grounds of obviousness-type double patenting in view of commonly-assigned U.S. Patent No. 4,209,804 (Dil). We reverse.

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BACKGROUND

Nature of Braat's Invention

The real party in interest in this case is U.S. Philips Corporation (Philips), the assignee of both the Braat application and the Dil patent. The Braat application is based, through two intervening continuing applications, on application Serial No. 925,433 filed July 17, 1978, which in turn claims priority from a Netherlands patent application filed April 3, 1978. The Dil patent issued June 24, 1980, on an application filed January 31, 1979.

Both the Braat application and the Dil patent are concerned with optical record carriers of the type that store information which can be retrieved by scanning the record carrier with a beam of radiation such as a laser beam. One commonly-known example of such a record carrier is the compact disc, or CD.

Record carriers are generally circular, and store the information in tracks extending around the surface of the carrier. The tracks are made up of "information areas" separated by "intermediate regions." For example, the information areas can be pits formed in the track, and the intermediate regions can be lands formed between the pits. Information can be encoded by varying the length or spacing between the pits. A read apparatus is used to retrieve the information by projecting a read beam onto the information tracks and detecting variations in the light transmitted through or reflected from the tracks as the beam passes over the information areas.

The Braat application is concerned with the ability to increase the amount of information which can be stored on a record carrier. One way to do so, of course, is to place the tracks closer together. However, the minimum spacing between the tracks is limited by the ability of the read apparatus to focus the read beam on a single track. If the tracks are placed too close together, then a read beam which is intended to illuminate a certain track may inadvertently illuminate an adjacent track as well, resulting in interference or "cross-talk."

The Braat application discloses a way to reduce the effect of "cross-talk," so that even if more than one track is inadvertently illuminated, the apparatus can still accurately read the stored information. This is done by alternating the "phase depth" 1 of adjacent tracks (or, more generically, of adjacent track portions) and then using two different detection systems, one of which is particularly sensitive to the signal from track portions of one phase depth and the other of which is sensitive to the signal from track portions of the other phase depth. As a result, the tracks can be placed closer together.

In the preferred embodiment described in the Braat application, the phase depth is altered by varying the physical depth of the pits in adjacent tracks. Figure 3 of the Braat application (shown below) is a radial cross-section of the preferred embodiment, and illustrates this concept.

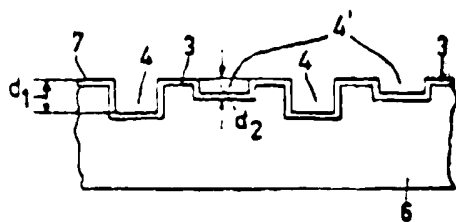


Fig. 3

As seen above, the tracks alternate between ones which have information areas (pits) 4 which are of a depth d_1 , and ones which have information areas 4T of depth d_2 . 2

Claim 8 is illustrative of the claims on appeal. It reads as follows.

8. A record carrier comprising an information structure containing information adapted to be read with a beam of radiation of a single wavelength, said information structure having a plurality of adjacent information track portions each comprising a plurality of areas separated from each other along said track portion by intermediate regions having a different influence on the read beam than said areas, one track portion of a pair of said

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adjacent track portions containing areas of a configuration which diffract the read beam of said single wavelength incident thereon into a zero order subbeam and a first order subbeam with a first phase difference therebetween and the other track portion of said pair containing areas of a second configuration which diffract the read beam of said single wavelength incident thereon into said zero and first order subbeams with a second phase difference therebetween which is different from said first phase difference.

The Dil Patent

The Dil patent is also concerned with controlling the phase depth of information areas on record carriers, but is primarily concerned with the effect that the angle of the side walls of the information areas has on the phase depth. Dil teaches that a particularly useful record carrier is one which has V-shaped information areas with (1) a phase depth in the range between 100° and 125° , and (2) side walls whose angle of inclination is in the range between 65° and 85° (relative to the normal to the carrier surface).

Dil recognizes that this *improvement* is particularly useful when combined with the invention of the Braat application, which is specifically referred to, and so discloses an embodiment wherein alternating track portions have different phase depths, and the information areas have angled side walls. For example, the Dil patent specification includes the following:

Two types of information areas in one record carrier may for example be used in order to obtain a high information density, as is described in U.S. patent application Ser. No. 925,433, filed July 18, 1978 [Baat]. If in such a record carrier use is made of the concept underlying the invention, said record carrier is characterized in that between first information tracks containing information areas with a phase depth between 100° and 110° second information tracks are formed which contain information areas whose phase depth is approximately 180° .

Claim 1 of Dil is directed to the improvement disclosed in that patent, i.e., a record carrier having angled side walls. Specifically, it states in relevant part:

1. A record carrier ... characterized in that the cross-section, transverse to the track direction, of the information areas is substantially V-shaped, that the phase depth of the information areas has one value between 100° and 125° , and that the angle of inclination between the walls of the information areas and the normal to the record carrier is substantially constant and has a value between 65° and 85° .

However, *dependent* claims 5 and 6 of Dil recite as an additional feature the alternating phase depth structure of the Braat application. For example, claim 5 reads as follows:

5. A record carrier as claimed in claim 1, characterized in that between first information tracks containing information areas with a phase depth between 100° and 110° second information tracks are formed which contain information areas whose phase depth is approximately 180° .

The PTO examiner rejected claims 8-10, 13, and 15-17 of the Braat application under the doctrine of obviousness-type double patenting as claiming subject matter not patentably distinct from that claimed in claims 1, 5 and 6 of the Dil patent. On appeal, the Board found that *independent claim 1 of Dil alone did not form a proper basis for a double patenting rejection*, but that dependent claims 5 and 6 did support the rejection. The following are excerpts from the Board's opinion:

We agree with and sustain the rejection of claims 8, 9, 10, 13, 15, 16 and 17 on the basis of double patenting with respect to claims 5/1 and 6/1 of the Dil patent. The claims here being broader than claims 5/1 and 6/1 in the Dil Patent, the double patenting rejection is of the type created by the courts to prevent unjustified timewise extension of the right to exclude granted by a patent no matter how the exclusion [sic, extension] is brought about. See *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982).

Appellant has also argued that the Office in granting the Dil patent must have made the determination that those claims are patentably distinct from the claims of the present application, and hence based upon such patentable distinction he is entitled to the claims. Whether or not the claims in Dil are patentably distinct from the claims in the instant application is not the issue. The issue is whether the claims on appeal are patentably distinct over claims 5/1 and 6/1 of Dil. Manifestly, the claims rejected for double patenting with respect to claims 5/1 and 6/1 of Dil are not patentable over those claims.

This appeal followed.

OPINION

Obviousness-type double patenting is a judicially created doctrine intended to prevent

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improper timewise extension of the patent right by prohibiting the issuance of claims in a second patent which are not "patentably distinct" from the claims of a first patent. See *In re Longi*, 759 F.2d 887, 892, 225 USPQ 645, 648 (Fed. Cir. 1985). The doctrine has also been phrased as prohibiting claims in the second patent which define "merely an obvious variation" of an invention claimed in the first patent. *In re Vogel*, 422 F.2d 438, 441, 164 USPQ 619, 622 (CCPA 1970). We note at the outset the difficulty which arises in all obviousness-type double patenting cases of determining when a claim is or is not an obvious variation of another *claim*. As this court's predecessor, the CCPA, noted in *Vogel*, 422 F.2d at 441-42, 164 USPQ at 622, a claim often does not describe any particular thing but instead defines the boundary of patent protection, and it is difficult to try to determine what is a mere obvious variation of a legal boundary. However, this court has endorsed an obviousness determination similar to, but not necessarily the same as, that undertaken under 35 USC §103 in determining the propriety of a rejection for double patenting. See *Longi*, 759 F.2d at 892 n.4, 225 USPQ at 648 n.4.

The crux of this appeal comes down to whether the Board erred in applying a "one-way" patentability determination instead of a "two-way" determination. The Board correctly found that the rejected claims of Braat are merely obvious variations of the invention described by dependent claims 5/1 and 6/1 of Dil. The only difference between the claims of Braat and claims 5/1 and 6/1 of Dil is the *omission* of the requirement in the claims of Dil of information areas having side walls which are angled at a particular angle, and we do not think that *omission* of such a limitation in the present case would constitute an unobvious modification. The issue is whether the Board erred in concluding that such a one-way determination was all that was necessary or whether it was necessary to also determine whether the claims of Dil are patentably distinct from the invention described by the rejected claims of Braat; i.e., whether the *addition* in the claims of Dil of side walls which are angled at a particular angle was merely an obvious modification over the invention claimed in Braat.

On appeal, Philips (the assignee) attempts to characterize the invention of Dil as an improvement over the invention of the Braat application, citing 3 D. Chisum *Patents*, §9.03 [2] [c] (1990), entitled "Generic Claim Issuing After Later Filed Specific or Improvement Claim," as well as *In re Borah*, 345 F.2d 1009, 148 USPQ 213 (CCPA 1966), for the proposition that when a latter filed improvement patent issues before an earlier filed basic invention, a double patenting rejection is only proper against the claims to the basic invention if the improvement is not patentably distinct from the basic invention. The rationale behind this proposition is that an applicant (or applicants), who files applications for basic and improvement patents should not be penalized by the rate of progress of the applications through the PTO, a matter over which the applicant does not have complete control. See Chisum, *supra*. In this situation, the order of issuance is, in effect, ignored, and the relevant determination becomes whether the improvement is patentably distinct from the generic invention. *Id.*

We hesitate to characterize the Dil invention as an "improvement" over the Braat invention. The word "improvement" implies that it was developed specifically for use with the "basic" invention, and thus must have come later in time. The Dil patent invention, however, is totally separate from that of Braat, and could conceivably have been developed earlier rather than later. The inventions of Dil and Braat are independent but when jointly used may complement each other, and it is for that reason that Dil disclosed the Braat invention in his own patent application and, in claims 5/1 and 6/1, claimed the use of the two inventions in combination. A better characterization of the relationship between the inventions is as combination/subcombination. Braat and Dil each developed separate subcombination inventions, which are described by their respective independent claims. Dil then *combined* these two subcombinations to form a third invention. This combination is described by dependent claims 5/1 and 6/1 of Dil.

[1] However, we agree that the reasoning of *Borah* and Chisum, §9.03 [2] [c] is appli

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cable in the present case. 4 Philips could not have included the claims of Dil in the Braat application, for Braat did not invent the subject matter of the Dil claims, i.e., information areas having V-shaped side walls at particular angles of inclination. Nor could Philips have included the claims of Braat in the Dil application, for Dil did not invent the subject matter of the Braat application, i.e., adjacent track segments of different phase depth. Philips filed the Braat and Dil applications so as to maintain proper inventorship, with claims directed to Braat's "subcombination" invention in the first application and claims directed to both Dil's "subcombination" invention and to the "combination" invention in the second application. Philips even acknowledged in Dil's application that part of the combination invention was invented by Braat, not Dil. It is not Phillips' fault that the combination claims in the Dil patent issued first. Thus, a double patenting rejection is sustainable here only if claims 5/1 and 6/1 of Dil are not patentably distinct from the subject matter defined by the rejected claims of Braat, and the Board erred in sustaining the double patenting rejection without making such a "two-way" determination.

We are further convinced that claims 5/1 and 6/1 of Dil are patentably distinct from the subject matter defined by the claims of Braat. Claims 5/1 and 6/1 of Dil, of course, include the limitations of Dil's independent claim 1, which requires, among other things, V-shaped information areas with side walls having an angle of inclination, relative to the normal to the record carrier, of between 65° and 85°. There is nothing in the rejected claims of Braat which refers to any angling of the side walls of the information areas, much less the specific angles recited in claim 1 of Dil. Moreover, we note that in the preferred embodiment of the Braat application, the information areas are all rectangular, and have side walls which are not inclined relative to the normal to the carrier. 5 Since the subject matter embraced by the rejected claims of Braat does not suggest the record carrier recited by claims 5/1 and 6/1 of Dil, we conclude that the claims of the Braat application and the Dil patent are patentably distinct, and that the double patenting rejection was in error.

It is true that allowance of the Braat application will result in some timewise extension of Philips' patent protection of the Dil structure. This is because Braat's claims dominate the invention of Dil claims 5/1 and 6/1. As our predecessor court pointed out in *Borah*, in analogizing the *Stanley* decision, "We see ... that as a matter of law the extension of protection objection is not necessarily controlling." 354 F.2d at 1017. 148 USPQ at 220. There is nothing to the contrary in the 1982 *Van Ornum* case cited by the Board. The reason the CCPA affirmed the double patenting rejection in *Van Ornum* is clearly stated in the opinion, 686 F.2d at 943. 214 USPQ at 766 (emphasis in original).

he *only difference* between the claims on appeal and the claims of the '799 patent *resides in the recited ratio* of high to low molecular weight butyl rubber, as follows:

application: between 20/80 and 60/40

patent '799: between 35/65 and 45/55.

[2] The passage which the Board appears to have focussed on in *Van Ornum* states: "The fundamental reason for the rule [against "double patenting"] is *to prevent unjustified timewise extension of the right to exclude* granted by a patent no matter how the extension is brought about." 686 F.2d at 943-44, 214 USPQ at 766 (emphasis in original) (quoting *In re Schmeller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968)). Thus, only if the extension of patent right is *unjustified* is a double patenting rejection appropriate. There are situations where the extension is justified. *See Borah; In re Kaplan*, 789 F.2d 1574, 1577-78, 229 USPQ 678, 681-82 (Fed. Cir. 1986). This case presents such a situation.

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CONCLUSION

For the foregoing reasons, the decision of the Board is REVERSED

Footnotes

Footnote 1. When the read beam is incident on the surface of the record carrier, it is diffracted into a zero order subbeam, a number of first order subbeams, and a large number of higher order subbeams. The term "phase depth" is defined in the Braat application as the phase difference between the zero order subbeam and the first order subbeams. The phase depth of a track portion is dependent on numerous factors, including the physical depth of the track portion and, as will be discussed further with respect to the Dil patent, the angle of the side walls of the information areas which make up the track portion.

Footnote 2. The depth variation shown in Fig. 3 is greatly exaggerated; in reality this depth variation is very small, i.e., on the order of a fraction of the wavelength of the read beam.

Footnote 3. Although *Borah* is the latest authority of which we are aware which stands for this proposition, it is certainly not the only one. See also *In re Stanley*, 214 F.2d 151, 102 USPQ 234 (CCPA 1954); *In re Calvert*, 97 F.2d 638, 38 USPQ 184 (CCPA 1938); *Thomson-Houston Elec. Co. v. Elmira & Horseheads Ry. Co.*, 71 F. 396 (2d Cir.), *cert. denied* 163 U.S. 685 (1896); *Thomson-Houston Elec. Co. v. Ohio Brass Co.*, 80 F. 712 (6th Cir. 1897). In fact, *Stanley* is more relevant to the present case than is *Borah*, since *Stanley* deals specifically with commonly-assigned inventions of two co-workers. *Borah* approved *Stanley* notwithstanding it extended protection for four years. See *Borah*, 354 F.2d at 1017, 148 USPQ at 220.

Footnote 4. In his brief to this court, the PTO solicitor's primary objection to Braat's reliance on the reasoning of *Borah* and Chisum is that Braat did not adequately raise this argument below and thus is precluded from raising it on appeal. We disagree. Braat has argued throughout these proceedings that the double patenting rejection was in error because the claims of Dil are patentable over the subject matter of the claims of Braat, even if the contrary is not true. The Board disagreed, stating that it was not necessary to make such a ("two-way" determination. On appeal, Braat has merely pointed out where the Board erred, and has cited persuasive authority for his position.

Footnote 5. In determining whether one claim is patentable in view of the subject matter of another *claim*, it is useful to compare the one claim with a tangible embodiment which is disclosed and which falls within the scope of the other claim. The patent disclosure must not be used as prior art. See *Vogel*, 422 F.2d at 442, 164 USPQ at 622.

- End of Case -

In re Borah, 148 USPQ 213 (CCPA 1966)

In re »Borah«

**(CCPA)
148 USPQ 213**

Decided Jan. 6, 1966

Appl. No. 7450

U.S. Court of Customs and Patent Appeals

Headnotes

PATENTS

1. Court of Customs and Patent Appeals-Issues determined-Ex parte patent cases (§ 28.203)

References cited in final rejection were not referred to in examiner's answer or in Board's opinion and were not included in record in court; hence, they are not before court.

2. Double patenting-In general (§ 33.1)

After filing of application on basic combination, applicant filed application to patent combination consisting of basic combination and additional element and patent issued thereon; fact that grant of patent, containing dominating claims, on basic combination will result in extension of period of protection beyond expiration of first issued patent is not fatal to applicant's right to obtain basic patent; claims to basic combination are allowed since patentable difference exists between them and claims of first issued patent.

3. Double patenting-Tests of (§ 33.9)

Test of double patenting is whether differences between claims of applicant's patent and claims of involved application would have been obvious to one of ordinary skill in the art; where involved claims cover basic combination and patent claims cover basic combination and additional element, obviousness issue turns on addition of structure to basic combination, i.e., obviousness of improvement defined in patent claims, not obviousness of basic structure, given the improvement as prior art, which it is not.

Alfred J. ...

4. Patentability-Aggregation or combination-Omission of part (§ 51.161)

Patentability cannot be based on mere omission, from prior art structure, of element together with its function.

5. Double patenting-Tests of (§ 33.9)

Differences between appealed and patented claims must be patentable differences in order to avoid double patenting.

Particular patents-Molding Apparatus

Borah, Molding Apparatus, claims 1 to 4 and 11 to 13 of application allowed.

Case History and Disposition:

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Appeal from Board of Appeals of the Patent Office.

Application for patent of John E. Borah, Serial No. 11,533, filed Feb. 29, 1960; Patent Office Group 320. From decision rejecting claims 1 to 4 and 11 to 13, applicant appeals. Reversed.

Attorneys:

Marmaduke A. Hobbs, South Bend, Ind., and William T. Estabrook, Washington, D.C., for appellant.

Clarence W. Moore (S. Wm. Cochran of counsel) for Commissioner of Patents.

Judge:

Before Worley, Chief Judge, and Rich, Martin, Smith, and Almond, Associate Judges.

Opinion Text**Opinion By:**

Rich, Judge.

This appeal is from the decision of

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the Patent Office Board of Appeals affirming the rejection of claims 1-4 and 11-13 of application serial No. 11,533, filed February 29, 1960, for "Molding Apparatus."

The sole ground of rejection before us is double patenting. The examiner made additional rejections on prior art but the board reversed them. The board also reversed the double patenting rejection of claims 6, 8, 9, and 10, which stand allowed. The reference relied on to support the double patenting rejection is appellant's own patent:

Borah 2,983,953 May 16, 1961.

Double patenting issues come before us on a great variety of fact situations. Generally speaking, the present case is one in which the applicant, after filing an application for patent on a machine, made further developments or improvements and a few months later filed a second application disclosing the improvements along with the basic machine in which they were incorporated, which basic machine was itself an improvement of an old and well-known molding press of the hydraulic ram, heated platen type. The second or improvement application enjoyed a speedy prosecution in the Patent Office and a patent issued thereon about nine months after it was filed. Meanwhile the first application met with continuing rejection and on the third action, given six months after the applicant's patent issued, faced the additional rejection of double patenting. The examiner thus stated his position as to the appealed claims in his initial double patenting rejection:

Claims 1-4, 11-13 * * * are rejected on the ground of double patenting. The claims do not patentably distinguish over claims 4 and 5 of applicant's own patent No. 2,983,953. The claims appear to differ from the allowed [i.e. patented] claims only in scope.

[1] Subsequently, and after the applicant had evidently contended, on the basis of differences between the patent and application claims, that there was no double patenting, the examiner gave his final rejection in which he newly cited three references "of interest" ¹on which he relied to show that some of those differences, at least, were "old in the art." However, he made no reference to these references in his answer, the board neither mentioned nor relied on them in its opinion, and they have not been included in the record in this court. Under the circumstances, they are not before us. There is only one reference before us and that is Borah's patent.

To differentiate this case from many other double patenting situations, we note that it involves no assignment, terminal disclaimer, or diversity of inventorship. The sole question is whether an individual applicant is precluded from obtaining the appealed claims by reason of claims he has already obtained in his patent.

The Inventions

As above indicated, we are not concerned with a single invention but with the inventions disclosed in the first-filed application (here on appeal) *and* the improvement inventions disclosed in the Borah patent which issued on the later-filed application. ²We will describe them in that order.

The conventional prior art hydraulic platen press has upper and lower platens, arranged horizontally and parallel, the upper platen being fixed on the four corner posts of the press and the lower platen being pressed upwardly toward it by the hydraulic ram. Various kinds of molds in which molded articles are made can be squeezed between the platens. The mold used to illustrate the inventions is a four-part transfer mold consisting of a plunger plate which is attached to the upper platen, a bottom plate on the lower platen which is raised and lowered by the ram and upper and lower intermediate plates which get squeezed between them. The lower intermediate plate is the one which carries most of the cavities in which the articles are shaped and is also known as the cavity plate. The upper intermediate plate carries molding material, such as rubber, has holes or sprues through which it is squeezed into the cavities by the plunger plate, and is also known as the pot well plate.

The press itself being conventional equipment, the inventions all relate to the supporting and handling of the two intermediate mold plates and the bot

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tom mold plate in the course of repeated molding operations. During molding it is necessary, in some cases, to fill up the bottom plate with metal inserts to be incorporated in the molded articles. To this end it is desired to slide the bottom plate out of the press. Similarly, one desires to slide out the cavity plate to knock out the molded articles and in so doing one may have to invert the plate. When the press is opened it is also desired to separate the parts of the mold from one another forcibly, as they may tend to stick together.

The initial inventions made by Borah and described in the first-filed application at bar reside in adding to a standard press the following features of construction: a vertically movable suspension for the upper intermediate or pot well plate in the form of four vertical rods fixed to the plate and slidably suspended in brackets attached to the upper part of the press, having adjustable stop nuts determining the lowered position; a similar suspension for the lower intermediate or cavity plate but with longer rods, these rods supporting horizontal grooved tracks in which a flange on the plate slides, the tracks extending outwardly of the press so the plate can be moved from between the platens; recesses in the tracks and trunions on the plate flange so arranged that when the plate is outside the press it can be swung into an inverted position for emptying; and a second pair of grooved tracks associated with the lower platen so the bottom plate of the mold can be slid outwardly of the press for filling with inserts. In operation, when the press is closed all four plates of the mold are pressed together. When the press opens, the bottom plate moves downwardly with the lower platen and the two intermediate plates, absent sticking, drop down on their suspension shafts by gravity, stopping at different levels. The cavity plate can then be pulled out on its tracks, dumped by inversion, righted, and slid back in place for the next operation. If inserts are being used, the bottom plate can be slid out and filled and returned. Since the mold plates are made of steel and desirably may be quite large with many mold cavities for efficiency, they are very heavy and the handling mechanism above described makes it possible for a single operator to manipulate them. What we have referred to as tracks are alternatively termed rails.

This basic novel combination was refined and further mechanized by Borah after filing his first application, the particulars relevant here being the following: to prevent hanging up of the pot well or upper intermediate plate, due to sticking when the press opens, he added to its suspension shafts what his brief refers to as "spring-kickers"; also the four simple shafts supporting the cavity plate were replaced by the piston rods of four hydraulic cylinders primarily for the purpose of serving as "pressure equalizers" which can be used "either to lift and lower the tracks [for the cavity plate] or merely to lower the tracks." There were other minor refinements and the addition of a knock-out mechanism for removing molded articles from the cavity plate which we need not consider. The improved machine was fully described in the second application, which issued as the reference patent, as though the whole were an independent invention, the specification containing, however, the general statement:

The present apparatus is an improvement on the apparatus disclosed and claimed in my copending application Serial No. 11,533 filed February 29, 1960.

Nothing more was said about what the earlier application invention was or how it had been improved.

For better understanding of the discussion, we must describe in more detail the "spring kickers" which help to separate the top mold section from the upper intermediate mold section. The latter is suspended on four vertical sliding shafts, as above stated. The improvement consisted in adding ball bearings for the shafts to slide in, mounting cylinders on the supporting brackets into which the ends of the shafts moved when the press closed, the cylinders being a little longer than the distance traversed by the shafts, adding a flange to the top of each shaft and putting a short section of coil spring in each cylinder. An adjustable screw plug closes each cylinder. When the press is closed, the coil springs are compressed between the flanges on the shafts and the screw plugs. When the press opens, the springs act on the shafts to "kick" the upper intermediate plate carried by them loose from the top mold plate to overcome sticking. The spring tension can be adjusted by moving the plugs in or out.

Fig. 4 of the improvement patent drawings, with the names of parts added, will aid in understanding both the basic and improved structures.

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Arguments

One of appellant's principal points in argument is that

In every claim of the appellant's issued patent, one, two or three of these additional mechanisms have been specifically recited, thus claiming a *new* and *different* combination than is being claimed in the present application. [Emphasis ours.]

While this is true, the legal issue is whether this is enough. The truth of the statement may be seen by inspection of the only two of the patent claims relied on for the rejection, claims 4 and 5, the new and different additional mechanism which makes the new and different combination being italicized [breakdown format supplied by us]:

4. A mold operating and handling apparatus for use in conjunction with a press having a ram, a head, and platens operatively connected to said ram and head, and with a mold having a top and bottom and upper and lower intermediate sections, comprising

[A] a pair of spaced parallel rails mounted on opposite sides of said ram platen and extending from the press for moving said bottom section from a position directly above said ram platen to a position beyond the press,

[A] a pair of horizontally disposed vertically movable rails above said first mentioned pair of rails spaced laterally from one another and extending from the press for [L] supporting said lower intermediate section,

[B] a pair of vertical shafts spaced along each of said second mentioned rails and extending upwardly on opposite sides of the press,

[Z] *a hydraulic cylinder connected to each of said vertical shafts for moving said second pair of rails downwardly to a predetermined position* , means for inverting said lower intermediate section,

[C] a pair of vertical shafts at each end of the [U] upper intermediate mold section and extending upwardly on opposite sides of the press and having a stop means for determining the lowermost position of said intermediate mold section,

[Y] *a cylindrical member around each of said second mentioned vertical shafts, and a spring reacting on each of said shafts for applying an initial force in the direction to separate said upper mold section and said upper intermediate mold section* .

5. A mold operating and handling apparatus for use in conjunction with a press having a ram and a head, and with a mold having a top and bottom and upper and lower intermediate sections, comprising

[A] a pair of horizontally disposed vertically movable rails spaced laterally from one another and extending from the press.

[B] a pair of vertical shafts spaced along each of said rails and extending upwardly on opposite sides of the press for supporting said lower intermediate section.

pivot means between said lower intermediate section and said rails for inverting said lower intermediate section.

[C] a pair of vertical shafts at each end of the upper intermediate mold sections extending upwardly on opposite sides of the press and having a stop means for determining the lowermost position of said intermediate mold section.

[Y] and *a spring reacting on each of said shafts for applying an initial force in the direction of separate said upper mold section and said upper intermediate mold section*.

The bracketed letters are added to key in with appellant's argument, later referred to. For comparison with these patent claims we now present the broadest application claim on appeal:

4. In a mold manipulating apparatus for use in conjunction with a press having adjacent upper and lower platens and with a mold having a top and bottom and intermediate sections:

[A] a pair of horizontally disposed tracks movable vertically and relative to both said adjacent platens and spaced laterally from one another and extending from the press, and

[B] means suspending said tracks between said upper and lower platens in spaced relation thereto for determining the downward travel of said tracks,

[C] the intermediate mold section having a portion supported by said tracks and movable from a position between said top and bottom mold sections to a position beyond the press.

It is self-evident that application claim 4 is broader than patent claims 4 and 5 and that the improved structure described and claimed in the patent would be dominated by the appealed claim 4, the same being true of the other appealed claims. Appellant has described his situation by an alphabetical shorthand which is not entirely accurate but will suffice for illustration. He thus analyzes the claims of the appg218 plication and the patent and gives the appended legend:

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Appellant's complaint is that he has maintained a "clear line of demarcation" between the claims of the first and second applications throughout the prosecution, including in all patent claims "elements not even so much as known at the time the present application" was filed, meaning such elements as "Y" and "Z". Having thus limited his patent claims, he further points out that this "leaves the appellant in the position where he cannot prevent infringement of his basic concept if the infringer merely omits from the infringing structure the 'spring-kicker', 'pressure equalizers' and/or 'article knockout mechanism'." He says that his being in this posture "was due solely to Patent Office procedure and was not the fault of the appellant."

The Patent Office, in the examiner's answer, proposed that if he had gotten into that box he could get out of it through reissue procedures. That possibility terminated on May 16, 1963, two years after the Borah patent issued. 35 U.S.C. 251 The solicitor's brief now proposes that he could have kept himself out of his present predicament through either of two alternatives:

Upon developing his improvements of the basic apparatus, appellant had the clear choice of (1) filing a continuation-in-part application to include both the basic subject matter and the improvements or (2) filing a separate application on the improvements. The former course was indicated if there was any question as to whether the improvements were *separately patentable*. The latter course was proper only *if appellant had no doubts* as to the patentable nature of the improvements and was willing to defend that position on the merits. By choosing to file a separate application, appellant assumed the risk of the possible issuance of that patent before an issue was reached on his earlier application, and the consequent risk of possible loss of the broader protection sought in the basic application claims. [Emphasis ours.]

[2] The above suggestion as to the continuation-in-part procedure implies that the claims would *all* have been allowable in a *single* application from which it would seem to follow that the only reason for refusing them now is that the patent has issued, its term is running, and the granting of the appealed claims would result in timewise extension of the patent protection already granted, inadequate though it may be as protection. ³There can be no doubt that if appellant obtains a patent with the appealed dominating claims, if he files no terminal disclaimer, and if some court in the future sustains those claims, they will result in an extension of the period of his protection beyond the expiration date of the patent he now has. The question is: Is this fatal to his rights? We think not.

Opinion

Because of the complexities of the law of "double patenting" in its many guises, we would like to restate the situation here as we see it in its simplest form, using appellant's symbolism. He made an invention which we can call ABC + UL, a mechanical combination. He made an improvement on it which consists in adding Y. He did not then proceed to ask for a patent on the improvement of ABC + UL which consists in the addition of Y, "particularly pointing out and distinctly claiming" the *addition* of Y to *be* his invention, as 35 U.S.C. 112, 2nd par., would seem to indicate he should do. He conceived his invention to be a *new combination* he had invented, ABC + UL + Y. That is the situation as to patent claim 5. The situation as to claim 4 is that he says he has invented ABC + UL + YZ. Otherwise stated, he claimed his invention to be the *totality* of his apparatus *as improved*, which apparatus contains, of necessity, the basic apparatus as described in his original application and as claimed in the appealed claims. All this occurred, of course, while both ap

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plications were pending, the record disclosing the following time sequence:

29 Feb. 1960 first application filed (at bar)

27 June 1960 office action

12 Aug. 1960 second application filed (now patent)

22 Dec. 1960 amend first application

18 Apr. 1961 office action in first application

16 May 1961 reference patent issued

20 July 1961 amend first application

28 Nov. 1961 office action, double patenting rejection

23 Feb. 1962 amend first application

5 April 1962 FINAL rejection

17 July 1962 amend first application

3 Oct. 1962 appeal to Board of Appeals

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2 Jan. 1964 Board's 1st decision

5 Feb. 1964 Board denied rehearing

2 Mar. 1964 appeal to CCPA

With respect to these dates we note the fact that but for the rejections that have been *reversed* by the board and the double patenting rejection now before us, a patent on the application at bar could have issued in 1961, within a few months of the date of the Borah patent, and there would have been very little timewise extension of protection. Cf. *In re Sarett*, 51 CCPA 1180, 327 F.2d 1005, 140 USPQ 474.

We also note that in the 18 April 1961 action, when the examiner had both applications before him, nothing was said about the second application or any attempt made to apply Rule 78(b). ⁴

The application of the law to the foregoing facts is not without difficulty as the law and its past application are not without confusion.

The view of the examiner as expressed in his answer before the board was that the applicable rule of law is that which forbids more than one patent on *one* invention and that the appealed claims and patent claims 4 and 5 are all directed to the *same* invention. He seemed to recognize that the patent claims defined different combinations from the appealed claims but appears to have regarded them as directed to the same invention because the differences (the inclusion of element Y or elements YZ, *supra*) were unpatentable differences and all claims were simply for "various permutations and combinations of elements of the same basic apparatus, for example by merely omitting the structure which permits inversion of the intermediate mold."

The board summarily reversed the examiner on the appealed claims containing the limitations to the inversion apparatus, used by the examiner as an example of a mere "permutation." It sustained him, however, as to the claims which differed from the patent claims in omitting the spring-kicker apparatus and the hydraulic pressure equalizing cylinders, Y and Z. All we have to decide is whether this was legally proper. We think it was not.

The law relied on by the board was, first, *Miller v. Eagle*, 151 U.S. 186, 198 (1894), from which the board quoted the following:

* * * It must distinctly appear that the invention covered by the later patent was a separate invention, distinctly different and independent from that covered by the first patent; in other words, it must be something substantially different from that comprehended in the first patent. It must consist in something more than a mere distinction of the breadth or scope of the claims of each patent.

Considering that this statement was made in the context of two patents claiming the very same spring and that the claims contained no structural difference whatever, it would appear that appellant is in full compliance with whatever rule the above passage is assumed to state. Another generality of the Miller opinion, which immediately precedes that quoted by the board, is:

* * * where the second patent covers matter described in the prior patent, essentially distinct and separable from the invention covered thereby *and*

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claims made thereunder, its validity may be sustained. [Emphasis ours.]

It may safely be said that such generalities are not of much help, for what is the meaning of "essentially distinct and separable," of "substantially different" and similar phrases?

The only other authority cited by the board is a case primarily relied on by appellant, our decision in *In re Stanley et al.*, 41 CCPA 956, 214 F.2d 151, 102 USPQ 234. From it the board extracted two rules, the one-invention-one-patent rule of *Miller v. Eagle* and the rule "that two patents may not issue for different *forms* of the *same* invention when they are not inventively different." (Our emphasis.)

The actual decision in the Stanley case was that claims to a "generic invention" in a first-filed application were *not* rendered unpatentable by the issuance of a patent on a later application to one other than the inventor (there being a common assignee) on an *improvement* of the generic invention. The similarity to and the difference from the instant case is evident. The element present in Stanley and not present here is that the generic and improvement inventions could not have been included in a single application because of different inventorship. However, we do not consider that difference to be important here. In Stanley, this court sanctioned, in 1954, the issuance of a dominating patent to the owner of the improvement patent which had issued in 1950, notwithstanding the owner's protection would thereby be extended beyond the expiration of the improvement patent by several years. We see, therefore, that as a matter of law the extension of protection objection is not necessarily controlling.

Even closer to the present situation is the case of *In re Calvert*, thus summarized in the Stanley opinion (p. 964, 102 USPQ at 239):

The case of *In re Calvert*, 25 CCPA 1333, 97 F.2d 638, 38 USPQ 184, involved a fact situation very similar to that now before us, with the exception that the same inventor was involved in both the patent and the application. There the appellant had filed his application on a broad invention, and about four months later filed an application on an improvement over the broad invention. A patent first issued on the improvement, the claims of which were then used to reject the claims to the broad invention. The sole issue before this court was the rejection on double patenting. We reversed the Board of Appeals because we were of the opinion that the claims of the patent required the presence of a specific element not found in the claims to the generic invention.

A unanimous court said in *Calvert* (p. 1337, 38 USPQ at 187) that it reached this result on the basis that the appealed claims differed from the patent claims "in subject matter and scope * * * and are patentably distinguishable therefrom." The difference was that the patented article claims, directed to a rubber hydrochloride film, contained, by comparison with the application claims, an added ingredient to retard photochemical disintegration. The precise basis on which the court found that this was a "patentable" distinction does not appear.

[3] This brings us to what we regard as the crux of the present case. Are the distinctions here, residing in the presence or absence of the elements Y or YZ in the combination, patentable distinctions? As we view the matter-and we think the Patent Office takes the same view-the question is whether such differences would have been obvious to one of ordinary skill in the art.

As to Y, the spring-kicker, the board reasoned thus:

Since a spring is a well known expedient, often used to apply a basing [biasing] force, it is our opinion that the *omission* of the springs does not so change the scope of claim 1 that it distinguished patentably over claim 5 of the patent. [Our emphasis.]

As to all other claims, the same reasoning was applied. We cannot accept this reasoning and the conclusion of no patentable difference to which it led. The obviousness is not a question of omitting, but of *adding* spring-kickers. The board seems to have been reasoning in reverse, treating the subject matter of the patent claims as if it were prior art and then reasoning that it would be obvious to omit the springs if a biasing force was not wanted. Even if the board was not doing this, it was not justified in holding that adding spring-kickers, as defined in the patent claims, was obvious and not a patentable distinction on the basis of bald assertion *unsupported by any prior art reference*. We do not feel that the mere fact that springs are well-known biasing devices is enough to suggest the modification made by Borah in his mold handling apparatus. He does not merely attach a spring to something to be biased; he employs four springs in a particular manner in association with four particular shafts in claim 5. In claim 4 his spring-kicker apparatus is defined in even greater detail, shown *supra*. It is

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certainly no more obvious, in our view, than the structural details, made up of ancient mechanical elements quite as old and well-known as springs, which enabled the lower intermediate mold section to be inverted and which the board found a sufficient "patentable" distinction

Really, the whole issue turns on comparison of the appealed claims with claim 5 as it has the minimum difference, the inclusion of the spring-kicker arrangement. But in rejecting claims 12 and 13, claim 4 of the patent, with its added difference Z, the hydraulic equalizers, was also relied on ⁴and so we will consider the board's view of the obviousness of improving on the basic invention by adding the equalizers. The board said:

As it is common practice to provide hydraulic means to move a member, it is our opinion that the omission of this means amounts to the omission of an element and its function, and the claim differs only in scope over claim 4 of the patent.

We again see the reasoning about the *omission* of an element known to be present in a structure, which is not a question involved in the issue. The obviousness issue turns on the addition of structure, the obviousness of the improvement defined in the patent claim, not the obviousness of the basic structure, given the improvement as prior

[4] art, which it is not. The board, moreover, seems to be applying the well known negative test for patentability, namely, that it cannot be based on the *mere omission, from a prior art structure*, of an element together with its function. We have no prior art here. Tacked onto this logical error, furthermore, is the non sequitur that because the only difference from the patent claim is the omission of one of its elements, therefore the difference is only one of "scope."

Here again no prior art is relied on to show that the improvement residing in the hydraulic equalizers would be obvious. Appellant was not merely using a hydraulic means to move a member but had plural cylinders arranged in a specific way on plural specific members to achieve a particular result which seems to us quite as unobvious as anything else in his structure, found by the Patent Office to be patentable subject matter, tested against prior art, as evidenced by the issuance of the patent and by the withdrawal or reversal of every rejection of the appealed claims except the double patenting rejection.

[5] The solicitor's brief cites several cases for the proposition that the differences between the appealed and patented claims must be patentable differences. We need not discuss them as we agree. It quotes from *In re Simmons*, 50 CCPA 990, 312 F.2d 821, 136 USPQ 450, in support of the obviousness test for determining patentable difference. That case typifies several others with respect to the manner in which obviousness is to be determined. There the improvement made by Simmons over subject matter claimed in his prior patent was found to be obvious in view of the prior art Ransburg patent. A similar situation was present, in that prior art was relied on, in *In re Kiekhaefer*, 49 CCPA 943, 299 F.2d 866, 132 USPQ 636, and *In re Eckel*, 50 CCPA 1248, 317 F.2d 401, 137 USPQ 563, cited. At the argument reference was made to *In re Christensen*, 51 CCPA 1236, 330 F.2d 652, 141 USPQ 295. That case is not in point as we found there the *same* invention was defined in the appealed and patented claims not plural inventions as here, basic and improvement. In *re Zickendraht et al.*, 50 CCPA 1529, 319 F.2d 225, 138 USPQ 22, also cited, was a case in which there were two inventions but the court held no patentable distinction between them had been shown.

Finding, as we do, that the Patent Office was not justified in finding no patentable difference to exist between the appealed claims and the patent claims relied on, its holding of double patenting is *reversed*.

Footnotes

Footnote 1. *Novotny*, 1,993,942, Mar. 12, 1935; *Rieser*, 2,239,248, Apr. 22, 1941; *Clark, Jr.*, 2,289,102, July 7, 1942.

Footnote 2. When we use the term "invention" we do so without any implication of patentability and only to refer to the thing invented regardless of its patentability. One of the sources of confusion in this case and in many prior opinions is due to viewing two or more inventions as but one "invention" because the differences between them are not regarded as patentable differences. For further elaboration of this point see the concurring opinion in *In re Zickendraht et al.*, 50 CCPA 1529, 319 F.2d 225, 138 USPQ 22.

Footnote 3. The extension-of-protection objection might have been obviated by a terminal disclaimer under 35 U.S.C. 253 but the record shows no attempt on the part of appellant to avail himself of this possibility. See *In re Robeson*, 51 CCPA 1271, 331 F.2d 610, 141 USPQ 485, and *In re Kaye*, 51 CCPA 1465, 332 F.2d 816, 141 USPQ 829.

Footnote 4. The rule reads:

Where two or more applications filed by the same applicant * * * contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention in more than one application.

Sections 822 and 822.01 of the Manual of Patent Examining Procedure implementing the rule are also relevant. The latter states, in part:

Where claims in one application are unpatentable over claims of another application of the same inventor (either because they recite the same subject matter, or because *the prior art shows* that the differences do not impart a patentable distinction), a complete examination should be made of the claims of one application. The claims of the other application may be rejected on the claims of the one examined, *whether the claims of the one examined are allowed or not*. [Last emphasis in original, other one ours.]

Footnote 5. The board seems to have been confused in discussing claim 13 as it speaks of claim 5 setting forth a hydraulic cylinder, which is not the fact. We therefore assume it intended reference to claim 4.

Concurring Opinion Text

Concur By:

Worley, Chief Judge, concurs in result.

- End of Case -

All Other Cases

In re Goodman (CA FC) 29 USPQ2d 2010 (12/3/1993)

In re ▶Goodman◀ (CA FC) 29 USPQ2d 2010

In re ▶Goodman◀

**U.S. Court of Appeals Federal Circuit
29 USPQ2d 2010**

**Decided December 3, 1993
No. 93-1073**

Headnotes

JUDICIAL PRACTICE AND PROCEDURE

1. Procedure -- Judicial review -- Standard of review -- Patents (§ 410.4607.09)

Rejection of specification for failure to satisfy enablement requirement of 35 USC 112 is question of law which is reviewed independently on appeal, and factual findings underlying that conclusion are reviewed for clear error; rejection of application

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claims under doctrine of obviousness-type double patenting is also legal conclusion freely reviewed on appeal.

PATENTS

2. Patentability/Validity -- Specification -- Enablement (§ 115.1105)

Application claims for method of manufacturing mammalian peptides in plant cells were properly rejected for lack of enabling disclosure required by 35 USC 112, since record shows that practicing claimed method, which calls for integration of DNA construct encoding mammalian peptide into plant cells, would have required extensive experimentation for even small number of plants at time of application filing, and since specification therefore would not have enabled one skilled in biotechnology at that time to practice method for all plant cells as broadly claimed in application.

3. Patentability/Validity -- Anticipation -- Double patenting (§ 115.0708)

"Two way" analysis, which precludes obviousness-type double patenting rejection unless application claims are not patentably distinct from claims of prior patent and vice-versa, is applicable only if application was delayed by its rate of progress through PTO, over which applicant does not have complete control; "two way" analysis is therefore inapplicable in present case, even though application claims form genus containing species of extant patent claim, since rate of application's prosecution was dictated by applicant, who chose to forego immediate appeal on broader claims and instead filed continuation to seek early issuance of narrow species claims, rather than by PTO, and since holding otherwise would permit patentees, by adopting easy course of filing continuation or divisional application to obtain patent on narrow claims, to gain extension of term on species upon later issuance of patent encompassing broad genus.

4. Practice and procedure in Patent and Trademark Office -- Prosecution -- Disclaimer (§ 110.0925)

Patentability/Validity -- Anticipation -- Double patenting (§ 115.0708)

Application claims were properly rejected, absent terminal disclaimer for applicant's existing patent, for obviousness-type double patenting, since application claims are generic to species of invention covered by patent claim, and since without terminal disclaimer, extant species claims preclude issuance of generic application claims.

Particular patents -- Chemical -- Method for producing interferon

4,956,282, Goodman, Knauf, Houck and Comai, mammalian peptide expression in plant cells, issuance of claims 1-13 in application serial no. 07/507,380 precluded under doctrine of obviousness-type double patenting absent terminal disclaimer.

Case History and Disposition:

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Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences.

Patent application of Robert M. Goodman, Vic C. Knauf, Catherine M. Houck and Luca Comai, serial no. 07/507,380, continuation of no. 06/760,236, issued as patent no. 4,956,282. From rejection of claims 1-13, applicants appeal. Affirmed; Rich, J., concurs in result.

Attorneys:

Lloyd R. Day Jr., of Cooley, Godward, Castro, Huddleson & Tatum, Palo Alto, Calif. (Barbara Rae-Venter and Linda A. Sasaki, Palo Alto, on brief; Elizabeth Lassen, Calgene Inc., Davis, Calif., of counsel), for appellants.

Teddy S. Gron, associate solicitor, PTO (Fred E. McKelvey, solicitor, and Richard E. Schafer, associate solicitor, on brief; Albin F. Drost and Lee E. Barrett, of counsel), for appellee.

Judge:

Before Rich, Rader, and Schall, circuit judges.

Opinion Text**Opinion By:**

Rader, J.

Robert M. Goodman *et al.* (Goodman) appeal the rejection of claims 1-13 of application No. 07/507,380 (the '380 application). The Board of patent Appeals and Interferences (Board) of the United States Patent and Trademark Office (PTO) rejected for lack of an enabling disclosure and for obviousness-type double patenting. This court affirms the Board.

BACKGROUND

The claims on appeal define a method of manufacturing mammalian peptides in plant cells. The method calls for integration into plant cells of a DNA construct encoding a mammalian peptide. This transferred DNA construct includes regulatory regions functional in the plant. The regulatory regions instruct the plant cell to transcribe the region of the DNA coding for the mammalian

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peptide. The method calls for harvesting the valuable peptide after translation of the transcribed messenger RNA.

The application claims an invention of broad scope -- a method for producing mammalian peptides in plant cells. When the bacterium *Agrobacterium tumefaciens* infects a wound on a dicotyledonous plant, the bacterium attaches to the plant cell wall and introduces a particular piece of its Ti plasmid 1 DNA into the plant cell. This piece of plasmid is the T-DNA (Transferred DNA). The T-DNA integrates into the nuclear genome of the plant cell. The plant cell then manufactures certain enzymes, encoded according to the T-DNA segment, for synthesis of tumor-specific compounds called opines.

Accordingly, upon insertion of a foreign DNA segment into the T-region of the Ti plasmid, the natural genetic transfer functions of these bacteria introduce the foreign segment into the plant cell genome. Using its own cell machinery, the plant cell then dutifully strives to transcribe the T-DNA segment and translate the peptide it encodes. Numerous factors affect successful transcription and translation, including the regulatory gene regions (i.e., initiation and termination sequences) preceding and following the T-DNA segment as well as intracellular compounds present during protein formation. If a stable translation product results, the peptide can be harvested from the plant cells.

Independent claim 1 provides:

1. A method for producing a mammalian peptide which comprises:

growing plant cells containing an integrated sequence comprising,

a first expression cassette having in the direction of transcription (1) a transcriptional and translational initiation region functional in said plant cells, (2) a structural gene coding for said mammalian peptide, and (3) a termination region,

whereby said structural gene is expressed to produce said mammalian peptide; and

isolating said mammalian peptide substantially free of plant cell components.

Claims 1-6 specify methods for producing mammalian peptides in plant cells using expression cassettes 2 with initiation codons recognized by plant cells. Claims 7-9 are directed to production of the peptide interferon in plant cells. Claims 10-13 specify nucleic acid constructs for use in the method claims.

The '380 application is a continuation of 06/760,236, which issued as U.S. Patent No. 4,956,282 (the '282 patent). The '282 patent claims a method for producing an interferon in dicotyledonous plant cells. Claim 1 of the '282 patent is identical to claim 8 of the '380 application except that application claim 8 specifies only "plant cells," rather than dicotyledonous plant cells. The '380 application thus has claims broader than those of the issued patent. Stated otherwise, the claims of the '282 patent are species of the genus claimed in the '380 application.

Application claim 9 is similarly identical to claim 2 of the '282 patent with the exception of the dicotyledonous limitation. Application claim 13 is identical to claim 3 of the '282 patent except that the '282 patent is limited to gamma-interferon rather than "an interferon." Accordingly, these claims also present genus-species relationships between the '380 application and the '282 patent.

The specifications of the '282 patent and the '380 application describe the claimed method in general terms, but provide only a single working example. The example describes the formation of an expression cassette with regulatory regions functional in tobacco plants and a structural gene coding for gamma-interferon. In the example the expression cassette is joined to a selectable marker to simplify isolation of plant cells that successfully integrate the construct. The selectable marker consists of regulatory regions functional in tobacco plants and a DNA sequence coding for a tetracycline resistance gene.

Claims 1-6 on appeal, however, purport to cover any desired mammalian peptide produced in any plant cell. Dependent claims 2-6 add limitations -- such as specifying the use of a marker, Ti-plasmids, and T-DNA boundary regions -- but in no way limit the type of mammalian peptide produced or the type of plant cell used.

Independent claim 7, claim 8 dependent therefrom, and claim 9 dependent from claim 8, specify an interferon as the mammalian protein produced by the method. None

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of the claims, however, limit the type of plant cell in the method.

Claim 10 claims a DNA construct with regulatory regions functional in plant cells and a structural gene coding for an interferon. Claim 11, dependent therefrom, adds the limitation of a second sequence which is a selectable marker. Claim 12, further dependent from claim 11, requires the second sequence to include a T-DNA boundary. Independent claim 13 specifies a DNA construct for producing an interferon in plant cells and containing an antibiotic resistance selectable marker.

The Board's Rejection

The Board affirmed the Examiner's rejection of claims 1-9 under 35 U.S.C. Section 112, first paragraph. According to the Board, the specification did not enable one of ordinary skill in the art to produce any mammalian peptide with the claimed method on July 29, 1985, the effective filing date of the application. Regarding enablement, the Board stated:

[E]ven if one were to read into the claim recitation a limitation that the regulatory region was native either to the plant cell in question or the mammalian cell in question, the present specification would still lack adequate guidance to enable one of ordinary skill to extend [Goodman's] invention beyond the single working example.

According to the Board, Goodman's specification did not disclose the "plant functional" regulatory regions for plants beyond the single example. Thus, one of skill in the art could not replicate the invention in "all plants." Furthermore, the Board found that the specification taught only the *Agrobacterium*-mediated transformation method of plant transformation. This method works only with dicotyledonous plant cells, not all "plant cells."

The Board also affirmed the rejection of claims 1-13 under the doctrine of obviousnesstype double patenting in light of claims 1-3 of the '282 patent. The Board held that the issuance of the present claims in the absence of a terminal disclaimer would grant an " *unjustified timewise extension of right to exclude* granted by a patent." *In re Schneller*, 397 F.2d 350, 354, 158 USPQ 210, 214 (CCPA 1968) (emphasis added). The Board found that the conflicting claims are not patentably distinct from each other because both claim methods and expression cassettes for producing mammalian peptides in plant cells.

DISCUSSION

[1] Whether Goodman's specification satisfies 35 U.S.C. Section 112's enablement requirement is a question of law which this court reviews independently. *In re Vaeck*, 947 F.2d 488, 495, 20 USPQ2d 1438, 1444 (Fed. Cir. 1991); *Amgen, Inc. v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 1212, 18 USPQ2d 1016, 1026 (Fed. Cir.), *cert. denied*, 112 S. Ct. 169 (1991). This court reviews the factual findings underlying that conclusion of law for clear error. *Vaeck*, 947 F.2d at 495. Similarly, a rejection under the doctrine of obviousness-type double patenting is a legal conclusion this court reviews freely. *See In re Kalan*, 789 F.2d 1574, 229 USPQ 678 (Fed. Cir. 1986).

Enablement

The first paragraph of 35 U.S.C. Section 112 provides:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same. . . .

The specification, when filed, must enable one skilled in the particular art to use the invention without undue experimentation. *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). Naturally, the specification must teach those of skill in the art "how to make and how to use the invention as broadly as it is claimed." *Vaeck*, 947 F.2d at 496.

Goodman's specification contains a single example of producing gamma-interferon in the dicotyledonous species, tobacco. This single example, however, does not enable a biotechnician of ordinary skill to produce any type of mammalian protein in any type of plant cell. The specification does not contain sufficient information to enable the broad scope of the claims. For instance, production of peptides in monocotyledonous plants involves extensive problems unaddressed by Goodman's specification.

In an effort to show that his recombinant methods achieved comparable results in monocots as well as the higher-ordered dicot plants, Goodman cites an article by J.P. Nernalsteens et al., *An Agrobacterium-Transformed Cell Culture from the Monocot Asparagus Officinalis*, 3 ENBO J. 3039-41 (1984). However, the article found limited success transforming asparagus cells using *A. tumefaciens* as a gene delivery system:

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[F]ormal proof that these swellings resulted from T-DNA-induced cell proliferation was not given. Tissue cultures of transformed cell lines were not available, and T-DNA-specific markers such as opines were not identified. Recently, the detection of opines in such swellings on *Narcissus* has been reported (Hooykaas et al., 1984).

However, the presence of nopaline in swellings could be due to a transient expression of the nopaline synthase and would not be indicative for stable T-DNA transformations. . . . We conclude that T-DNA transfer to at least some of the monocots is possible, and that the opinespecific T-DNA promoters are active in these cells with an efficiency similar to that found in dicots. . . . Whether this finding can be used as a general method to select transformed monocot cell lines is presently under investigation.

Id. at 3040-41. The article expressly invited further "investigation" to determine whether the method works with monocots in general.

Hernalsteens also questioned the results described in Hooykaas-Van Slogteren et al., *Expression of Ti Plasmid Genes in Monocotyledonous Plants Infected with Agrobacterium tumefaciens*, 311 Nature 763 (1984), another reference Goodman cites to show success of the method with monocots. Like Hernalsteens, the Hooykaas-Van Slogteren article advocated more experimentation: "[F]urther research is needed to establish whether crops from other monocot families . . . can be transformed by the Ti plasmid." *Id.* at 764. Neither Hernalsteens nor Hooykaas show general use of the claimed method in monocot plants.

A 1985 article by Potrykus et al., *Direct Gene Transfer to Cells of a Gramineaceous Monocot*, 199 Mol. Gen. Genet. 183 (1985), characterizes even the modest optimism of Hernalsteens and Hooykaas as a departure from mainstream expectations:

[I]t has been widely considered that monocotyledenous [sic] plants, including the commercially important crop plants of the *Gramineae* family, are insensitive to [Ti plasmid transformation] and thus are not candidates for the use of this gene transfer system. Two recent reports have modified this opinion to some extent. . . .

[Hooykaas and Hernalsteens] have shown that the monocotyledonous [sic] plants tested are susceptible to *Agrobacterium* infection although in neither case was conclusive proof for the transfer and integration of foreign DNA presented. . . . Members of the family *Gramineae*, to which the most commercially important crops belong, have never been shown to be susceptible. Thus, although some monocots are susceptible to *A. tumefaciens*, there is still a major block to the prospects for genetic engineering of the *Gramineae*.

Id. at 187. This article, coupled with the hedgings in the Hernalsteens and Hooykaas articles, shows great unpredictability in the art when Goodman filed the broad claims in the '380 application in 1985.

Goodman's own 1987 article, *Gene Transfer in Crop Improvement*, 236 Science 48 (1987), underscores the "major block" to using the claimed method with monocot plant cells. Goodman reports: "Although data have been cited that *Agrobacterium* can transfer T-DNA to monocotyledonous hosts, clear evidence of T-DNA integration exists only for asparagus, and, even in that case, no transformed plants have been described." *Id.* at 52 (citation omitted).

Thus, even the references cited by Goodman to show enablement support the Board's position that great uncertainties encumbered *Agrobacterium*-mediated transformation in monocot plants at the time of filing. Goodman's 1987 article shows that the claimed invention did not overcome those uncertainties. Claims 6, 8, and 9 recite the *Agrobacterium* method of transformation. The record clearly supports the Board's determination that these claims are not enabled for the breadth of all varieties of plants.

Claims 1-5 and 7 do not include a limitation of transformation via *Agrobacterium*. These claims still specify incorporation of the mammalian peptide sequence into any plant cell. The record does not sustain Goodman's effort to describe other methods of gene transfer for incorporating mammalian peptides into any plant cell.

Goodman's own article describes bacterially mediated DNA transfer as the most advanced system of transformation in 1987, two years after the '380 application's filing date. *Id.* at 51. As the above references report, even this preferred method was ineffectual in the vast majority of monocot plants at the time of filing.

As an alternative method, Goodman suggests gene transfer by direct DNA uptake by the plant, accomplished using protoplasts instead of intact plant cells. 3his method could encompass monocot as well as dicot

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plants. Goodman's own report, however, undercuts this method:

Integration into plant chromosomes of foreign DNA introduced by direct uptake is a relatively rare event. . . . [A]pplication of direct DNA uptake to the cereals [monocots] may be limited because regeneration of whole plants from protoplasts has not yet been achieved for many cereal species.

Id. at 52. Again, Goodman makes this unfavorable assessment in 1987, two years after the filing date.

Goodman also asserts microinjection could transfer genes into all plant cells. Under the microinjection method micropipettes are used to inject DNA solutions into cells. Goodman reported in 1987, however, that transformation by microinjection of plant cells only worked with protoplasts. *Id.* at 53. As with direct DNA uptake, this limitation to protoplasts restricts the method's usefulness in monocots.

A final method of gene transfer cited by Goodman is viral-mediated transformation. Goodman again reported only very limited success with this method in 1987:

In plants, viral-based vectors are not likely to stably transform plant cells because integration of viral genes into plant chromosomes has not been detected.

Id. Thus, on Goodman's 1985 filing date, the record shows no reliable gene transformation method for use with monocot plants. Each of the methods for monocot plants was fraught with unpredictability. The teachings in the specification do not cure this unpredictability. The record shows that practicing a gene transformation method for all monocot plants, if possible at all in 1985, would have required extensive experimentation that would preclude patentability. See *White Consol. Indus. Inc. v. Vega Servo-Control, Inc.*, 713 F.2d 788, 218 USPQ 961 (Fed. Cir. 1983).

[2] In sum, this court discerns no error in the Board's conclusion of nonenablement. Goodman's specification does not enable one skilled in biotechnology in 1985 to practice the method for all "plant cells" as application claims 1-9 require. The record, especially Goodman's own article, shows the need for extensive experimentation to practice the claimed method for just a few plants, let alone all plant cells as broadly claimed in the application.

Double Patenting

The Board rejected claims 1-13 on grounds of obviousness-type double patenting. This court, having affirmed the rejection of claims 1-9 on other grounds, need only address the double patenting rejection of claims 10-13.

To prevent extension of the patent right beyond statutory limits, the doctrine of obviousness-type double patenting rejects application claims to subject matter different but not patentably distinct from the subject matter claimed in a prior patent. *In re Braat*, 937 F.2d 589, 592, 19 USPQ2d 1289, 1291-92 (Fed. Cir. 1991). Obviousness-type double patenting is a question of law. *Texas Instruments Inc. v International Trade Commission*, 988 F.2d 1165, 1179, 26 USPQ2d 1018, 1029 (Fed. Cir. 1993).

The double patenting determination involves two inquiries. First, is the same invention claimed twice? *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1278, 23 USPQ2d 1839, 1843 (Fed. Cir. 1992). This inquiry hinges upon the scope of the claims in question. *Id.* at 1280; *In re Vogel*, 422 F.2d 438, 441, 164 USPQ 619, 621-22 (CCPA 1970). If the claimed inventions are identical in scope, the proper rejection is under 35 U.S.C. Section 101 because an inventor is entitled to a single patent for an invention. *Miller v. Eagle Mfg. Co.*, 151 U.S. 186, 197 (1894); *In re Stanley*, 214 F.2d 151, 153, 102 USPQ 234, 236 (CCPA 1954). Claim 12 of the application claims a DNA construct to express a gene contained therein. Thus, the preamble of the claim recites "[a]n expression cassette"; however, the compositions of matter claimed are a broad genus of DNA constructs that each have:

[A] DNA sequence having in the direction of transcription a transcriptional and translational initiation region functional in plant cells, a structural gene coding for an interferon . . . a termination region functional in plant cells (independent claim 10) [and] including joined to said DNA sequence a second expression cassette comprising a second transcriptional and translational initiation region functional in plant cells, a structural gene coding for a peptide providing a phenotypic property capable of selection in plant cells . . . a termination region functional in plant cells (dependent claim 11) [and] including a T-DNA boundary (dependent claim 12).

A comparison of this claim and claim 3 of the '282 patent reveals that claim 3 is simply a species of this broad claim. Claim 3 is likewise simply a species of claim 13 of the application. Thus, the claimed inventions are not identical in scope.

If one claimed invention has a broader scope than the other, the court must proceed to a second inquiry: whether one claim

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defines merely an obvious variation of the other patent claim. *Vogel*, 422 F.2d at 441. Without a patentable distinction -- because the pending claim defines merely an obvious variation of the patented claim -- the patentee may overcome the double patenting rejection by filing a terminal disclaimer. *See In re Eckel*, 393 F.2d 848, 157 USPQ 415 (CCPA 1968).

In *In re Braat*, 937 F.2d 589, 593 [19 USPQ2d 1289] (Fed. Cir. 1991), this court required in certain circumstances, an additional inquiry to support the double patenting obviousness rejection. Under these circumstances, a double patenting obviousness rejection will only be sustained if the application claims are not patentably distinct from the prior patent claims, and the prior patent claims are also not patentably distinct from the application claims. This "two-ways" analysis is necessary because a later-filed improvement patent may issue before an earlier-filed basic invention. *Id.*; *see Stanley*, 214 F.2d 151 [102 USPQ 234].

[3] In *Braat*, the later-filed application contained claims to a patentable combination that included a subcombination which was the subject of an independent prior application. Although the later-filed application became a patent first, this court did not reduce the term of the earlier-filed, but later issued, patent. This court did not require a terminal disclaimer because Braat's application was held up not by the applicant, but by "the rate of progress of the application through the PTO, over which the applicant does not have complete control." *Braat*, 937 F.2d at 593. (*Cf.*, *Stanley*, 214 F.2d 151 (holding that the broad genus of an earlier-filed application was patentable even though a patent issued for a species of that genus).

This case requires no "two-way" analysis. Although application claims 12 and 13 form the genus containing the species of patent claim 3, PTO actions did not dictate the rate of prosecution. Rather, appellant chose to file a continuation and seek early issuance of the narrow species claims. The appellant also chose to forego an immediate appeal to this court on its broader claims when it filed a continuation application. Moreover, appellant argues that a terminal disclaimer is unwarranted.

Appellant's position could extend the term of the patent grant for many cases in a similar posture. By adopting the easy course of filing a continuation or divisional application to gain a narrow claim, a patentee could gain an extension of the term on a species when the broad genus later issued. This practice would extend the exclusionary right past the 17-year limit mandated by Congress. Under Supreme Court precedent, only one patent can issue for each patentable invention. *Miller*, 151 U.S. at 197. A second application -- "containing a broader claim, more generical in its character than the specific claim in the prior patent" -- typically cannot support an independent valid patent. *Miller*, 151 U.S. at 198; *See Stanley*, 214 F.2d at 153.

[4] Claim 12 and Claim 13 are generic to the species of invention covered by claim 3 of the patent. Thus, the generic invention is "anticipated" by the species of the patented invention. (*Cf.*, *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (holding that an earlier species disclosure in the *prior art* defeats any generic claim) 4. This court's predecessor has held that, without a terminal disclaimer, the species claims preclude issuance of the generic application. *In re Van Ornum*, 686 F.2d 937, 944, 214 USPQ 761, 767 (CCPA 1982); *Schneller*, 397 F.2d at 354. Accordingly, absent a terminal disclaimer, claims 12 and 13 were properly rejected under the doctrine of obviousness-type double patenting.

Appellant chose to group claims 10-12 together, and indeed application claim 12 is dependent on application claim 11, which claim is dependent on application claim 10; therefore, these claims stand or fall together. *In re Sernaker*, 702 F.2d 989, 217 USPQ 1 (Fed. Cir. 1983); *In re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986). It follows then that application claims 10 and 11 are -- like claim 12 -- not patentably distinct over patent claim 3. Because claim 12 must, in the absence of a terminal disclaimer, fall because of double patenting over the '282 patent, application claims 10-11 must likewise fall.

CONCLUSION

The specification provides insufficient guidance to enable one skilled in the art to perform the method of claims 1-9 with any plant cell. Accordingly, this court affirms the rejection of those claims pursuant to 35 U.S.C. Section 112, paragraph 1. We also affirm the rejection of claims 10-13 for double patenting.

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Costs

Each party to bear its own costs.

AFFIRMED

Rich, J., concurs in the result.

Footnotes

Footnote 1. Plasmids are extrachromosomal, closed circular nucleic acid molecules found in many bacterial species. The Ti plasmid is a *T*umor *i*nducing plasmid found in the bacterium *Agrobacterium tumefaciens* that is responsible for crown gall disease in plants (producing tumors).

Footnote 2. Expression cassettes are nucleic acid constructs containing sequences directing the cell to initiate transcription of an incorporated gene. The cassettes can often substitute for one another; frequently a cassette also contains a termination region.

Footnote 3. A protoplast is a plant cell that no longer has the rigid cell wall that normally surrounds it. See Bruce Alperis et al., *Molecular Biology of the Cell* 1143 (2d ed. 1989).

Footnote 4. Although this case does not strictly involve prior art because the effective filing date of the patent and the application are identical, the proposition is sufficiently analogous to lend support.

- End of Case -

All Other CasesIn re Berg (CA FC) 46 USPQ2d 1226 (3/30/1998)

In re Berg (CA FC) 46 USPQ2d 1226

In re Berg**U.S. Court of Appeals Federal Circuit
46 USPQ2d 1226**

Decided March 30, 1998

No. 97-1367

Headnotes**PATENTS****1. Patentability/Validity -- Anticipation -- Double patenting (§ 115.0708)**

Application claiming genus which contains species claimed in issued patent is not entitled to "two-way" test for obviousness-type double patenting, since instant case, in which both applications were filed on same date, does not present more typical scenario in which two-way test applies despite common inventive entities, namely when later-filed improvement patent issues before earlier-filed basic invention, since specifications of application and issued patent are identical, disclosures are almost exactly alike, and invention described in patent thus is not "totally separate" from that of application, and since inventions disclosed in both sets of claims had been completed before either application was filed.

2. Patentability/Validity -- Anticipation -- Double patenting (§ 115.0708)

Patent applicant is not entitled to exception of "two-way" test for obviousness-type double patenting if applicant can file all of its claims in one application but elects not to.

3. Patentability/Validity -- Anticipation -- Double patenting (§ 115.0708)

Applicants' simultaneous filing of two separate applications that could have been filed as one application disqualifies applicants

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from "two-way" test for obviousness-type double patenting, since applicants should be viewed as having taken calculated risk that, by simultaneously filing two separate applications, they might gain advantage of quickly issued narrow patent as well as advantage of broader application which took longer to issue as patent but consequently had later expiration date, and since effectively extending patent term is precisely result that doctrine of obviousness-type double patenting was created to prevent.

4. Patentability/Validity -- Anticipation -- Double patenting (§ 115.0708)

"Two-way" test for obviousness-type double patenting can only apply when applicant could not avoid separate filings, and then only if Patent and Trademark Office controlled rates of prosecution to cause later-filed species claims to issue before claims for genus in earlier application; question of control is irrelevant in present case, since applicants simultaneously filed two separate applications that could have been filed as one.

5. Patentability/Validity -- Anticipation -- Double patenting (§ 115.0708)

Holding that applicants are not entitled to exception of "two-way" test for obviousness-type double patenting does not produce unfair result in case in which applicants chose to simultaneously file two applications containing almost identical disclosures, with each disclosure supporting both sets of claims, since each of several options available to applicant filing both genus and species claims has distinct advantages and disadvantages, but none of those options are unreasonable, and since applicants in present case, by their manner of filing, assumed risk that they would be required to terminally disclaim.

Case History and Disposition:

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Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences.

Patent application of Todd A. Berg, Donley D. Rowenhorst, James G. Berg, and William K. Leonard, serial no. 07/918,360, filed July 23, 1992. From decision upholding examiner's rejection of all claims in application on ground of obviousness-type double patenting, applicants appeal. Affirmed.

Prior decision: 43 USPQ2d 1703

Attorneys:

Charles L. Gholz and Alton D. Rollins, of Spivak, McClelland, Maier & Neustadt, Arlington, Va., for appellant.

John M. Whealan, associate solicitor, U.S. Patent and Trademark Office; Nancy J. Link, solicitor, Albin F. Drost, deputy solicitor, and David J. Ball, Jr., associate solicitor, for appellee.

Judge:

Before Michel, Clevenger, and Gajarsa, circuit judges.

Opinion Text**Opinion By:**

Michel, J.

Todd A. Berg, Donley D. Rowenhorst, James G. Berg and William K. Leonard (collectively, "Berg") appeal the decision of the United States Patent and Trademark Office's (the "PTO's") Board of Patent Appeals and Interferences (the "Board") upholding the examiner's rejection of all the claims of patent application Serial No. 07/918,360 (the "application"), based on certain claims of U.S. Patent No. 5,201,916 previously issued to Berg (the "'916 patent"), on the ground of obviousness-type double patenting. *In re Berg*, No. 94-2492 (B.P.A.I. Feb. 12, 1997). This case was submitted for our decision following oral argument on January 5, 1998. Because the Board did not err in applying the "one-way" test, rather than the "two-way" test, to the genus claims of the simultaneously filed application in light of the nearly identical species claims of the patent to the same four inventors, we affirm.

BACKGROUND

The application at issue was filed on July 23, 1992. On the same day, the same four inventors filed a second application that issued as the '916 patent on April 13, 1993. Both the '916 patent and the application are assigned to the inventors' employer, Minnesota Mining and Manufacturing Company ("3M"). The specifications of the '916 patent and the application are practically identical. Each discloses a molding method for preparing an alpha alumina abrasive particle suitable for use as an abrasive grit in an abrasive composition and the composition resulting from performing the method. The disclosed molding method includes a step of providing a mold that has at least one surface that provides an opening to a cavity with a specified shape. A liquid dispersion including particles to be converted to alpha alumina is then introduced through the opening into the mold cavity. Both the '916 patent and the application describe a preferred embodiment in which the exposed surface of the liquid dispersion in the cavity does not extend substantially beyond the plane of the opening, which assures that abrasive particles prepared by the process are substantially uniform in shape and size. This effect is achieved by wiping away any portion of the liquid dispersion in the cavity that extends

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above the plane of the mold surface. In contrast, in a disclosed but non-preferred embodiment of the invention, the dispersion is simply permitted to extend above the mold surface. Both the '916 patent and the application describe the preferred "wiping" embodiment as enhancing the beneficial grinding performance properties of the composition which employs the abrasive particles so produced.

The application claims that matured into the '916 patent were allowed by the examiner in a first Office action on September 22, 1992. Six days thereafter, the examiner entered an Office action rejecting the claims of the Berg application on the sole ground of obviousness-type double patenting over certain claims of the soon-to-issue '916 patent. Berg did not dispute that the claims of the application were obvious in light of the '916 patent claims, but Berg refused to enter a terminal disclaimer in the application, thus prompting a final rejection which Berg appealed to the Board.

The Board affirmed the examiner's rejection based on obviousness-type double patenting, ruling that claim 1 of the '916 patent was a species of the genus claimed in claim 1 of the application. 1 The Board also found that Berg could have put all of the claims in the same application but elected not to, and hence chose to assume the risk as to which application would complete prosecution first. The Board concluded that Berg effectively controlled the application's rate of prosecution compared to the '916 patent and, therefore, the one-way test for obviousness-type double patenting applied. Under that test, the Board found that Berg's application claims were obvious in light of the '916 patent claims. Therefore, Berg had to file a terminal disclaimer in order for its application claims to issue. As Berg had refused to file a terminal disclaimer, the Board sustained the rejection, and Berg timely appealed to this court. We have jurisdiction under 28 U.S.C. Section 1295(a)(4)(A) (1994).

DISCUSSION

I. The Relationship of the Claims

The invention defined in claim 1 of the Berg application is almost identical to that defined in claim 1 of the '916 patent. The only potentially patentably distinct difference is found in step (c). 2 In the '916 patent,

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step (c) requires "introducing said dispersion into said mold cavity *such that no exposed surface of said dispersion extends substantially beyond said plane of said first surface of said mold*," (emphasis added). Step (c) of the Berg application, however, only requires "introducing said dispersion into said mold cavity." The application claim, therefore, encompasses the '916 patent claim, and the '916 patent claim anticipates the application claim. The relationship of the application claim to the '916 patent claim, accordingly, is one of genus to species.

II. Obviousness-Type Double Patenting Rejections

Obviousness-type double patenting is a judge-made doctrine that prevents an extension of the patent right beyond the statutory time limit. It requires rejection of an application claim when the claimed subject matter is not patentably distinct from the subject matter claimed in a commonly owned patent. *See In re Braat*, 937 F.2d 589, 592, 19 USPQ2d 1289, 1291-92 (Fed. Cir. 1991). Its purpose is to prevent an unjustified extension of the term of the right to exclude granted by a patent by allowing a second patent claiming an obvious variant of the same invention to issue to the same owner later. *See In re Goodman*, 11 F.3d 1046, 1052, 29 USPQ2d 2010, 2015 (Fed. Cir. 1993). Obviousness-type double patenting is a question of law reviewed *de novo* by this court. *See id.*; *see also General Foods v. Studiengesellschaft Kohl MbH*, 972 F.2d 1272, 1277, 23 USPQ2d 1839, 1843 (Fed. Cir. 1992).

Generally, a "one-way" test has been applied to determine obviousness-type double patenting. Under that test, the examiner asks whether the application claims are obvious over the patent claims. In a recent case, with unusual circumstances, however, this court instead applied a "two-way" test. *See Braat*, 937 F.2d at 592, 19 USPQ2d at 1291-92. Under the two-way test, the examiner also asks whether the patent claims are obvious over the application claims. If not, the application claims later may be allowed. Thus, when the two-way test applies, some claims may be allowed that would have been rejected under the one-way test. One of our predecessor courts, the Court of Customs and Patent Appeals, also at various times applied an analysis similar to that used in *Braat* to determine obviousness-type double patenting. *See In re Borah*, 345 F.2d 1009, 1009, 148 USPQ 213, 214 (CCPA 1966); *In re Calvert*, 97 F.2d 638, 640, 38 USPQ 184, 185 (CCPA 1938). The essential concern was to prevent rejections for obviousness-type double patenting when the applicants filed first for a basic invention and later for an improvement, but, through no fault of the applicants, the PTO decided the applications in reverse order of filing, rejecting the basic application although it would have been allowed if the applications had been decided in the order of their filing. The question of whether the "one-way" test or the "two-way" test applies, the dispositive issue here, is one of law and therefore reviewed by this court without deference. *See In re Emert*, 124 F.3d 1458, 1460, 44 USPQ2d 1149, 1151 (Fed. Cir. 1997).

Under the one-way test, if the scope of the application and the patent claims is not identical, the court must ask whether the former defines merely an obvious variation of the latter. *See Goodman* 11 F.3d at 1052, 29 USPQ2d at 2015-16. If the application claim is not patentably distinct, in order to overcome the double patenting rejection, the applicant must file a "terminal disclaimer," foregoing that portion of the term of the second patent that extends beyond the term of the first. *See id.* at 1052, 29 USPQ2d at 2016; *see also Emert*, 124 F.3d at 1461-62, 44 USPQ2d at 1152.

Under special circumstances, however, this court and the Court of Customs and Patent Appeals have both made an exception and instead have applied a two-way test. Specifically, in *Braat*, this court examined the application claim and the patent claim to determine whether each was obvious in view of the other, rather than considering only whether the application claim was patentably distinct from the patent claim. *See* 937 F.2d at 593, 19 USPQ2d at 1292; *see also Borah*, 345 F.2d at 1009, 148 USPQ at 214; *Calvert*, 97 F.2d at 640, 38 USPQ at 185. Since *Braat*, many patent applicants facing an obviousness-type double patenting rejection under the one-way test have argued that they actually are entitled to the two-way test. The two-way test, however, is a narrow exception to the general rule of the one-way test. Indeed, the primary basis for the *Braat* decision -- different inventive entities -- was removed by the Patent Law Amendments Act of 1984 (the "1984 Act"). Nevertheless, the notion survives that in certain unusual circumstances, the applicant should receive the benefit of the two-way test. The question then is: when?

III. Application of the Obviousness-Type Double Patenting Rules to this Case

Berg does not argue here that it survives the one-way test, i.e., that its application

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claims are nonobvious in light of the claims of the '916 patent, but only that it is entitled to application of the two-way test because it filed the two applications simultaneously, and therefore cannot be responsible for their rates of prosecution through the PTO. According to Berg, under a two-way test, the rejection of its application claims cannot be sustained because the invention of claim 1 of the '916 patent is not obvious in light of claim 1 of the application. Because we hold that the Board was correct in applying the one-way test, however, we do not reach the issue of whether Berg's '916 patent claims are patentably distinct over the application claims.

In making the argument that it is not responsible for the relative rates of prosecution, Berg relies on cases such as *Borah* and *Calvert* in which an earlier-filed basic application was rejected based on a commonly-owned, later-filed improvement patent. *See Borah*, 354 F.2d at 1009, 148 USPQ at 214; *Calvert*, 97 F.2d at 640, 38 USPQ at 185. In these cases, the PTO took longer to examine the basic application than it did the improvement, causing the applications to issue in reverse order of filing. Berg asserts that its situation is analogous to those of the applicants in cases like *Borah* and *Calvert* because, as it filed the two applications simultaneously, it did not exercise control over their progress through the PTO. According to Berg, therefore, the PTO must be deemed responsible for the species claims issuing prior to the genus claims, thus entitling Berg to a patent on the genus claims without a terminal disclaimer. 3

The Board took the opposite view: the PTO cannot be seen as controlling the rates of prosecution because Berg chose to file its applications separately but simultaneously. The Board further found that

there is no apparent reason why appellants were prevented from presenting claims to the generic invention for examination in the application which matured into the issued Berg patent wherein claims to the best mode were presented. Further, like *Schneller*, subject matter covered by the claims of the Berg application (i.e., the best mode of practicing the invention) is fully disclosed and expressly claimed in the claims of the Berg patent.

Berg, slip op. 13. The Board held that "the term of patent protection for the best mode would be unjustifiably extended beyond the statutory time limit by allowance of the herein appealed claims." *Id.*

Although the decision of the Board affirming the application of the one-way test rather than the two-way test to Berg's application is correct, we hold, however, that this case is not appropriate for application of a "control of prosecution rates" analysis to determine whether Berg is entitled to the two-way test. Rather, we base our affirmance on the second stated rationale of the Board: because Berg could have filed the claims of its separate applications in a single application, and it simply chose to file two applications despite nearly identical disclosures, Berg is not entitled to the two-way test.

A. *The Special Circumstances Triggering the Two-Way Test are Not Present in Berg's Case*

[1] Berg relies on *Braat* to support application of the two-way test. *Braat* was an unusual case; moreover, its factual situation is not likely to be repeated since the 1984 Act went into effect. Even assuming that *Braat* retains some vitality, it is, nevertheless, distinguishable. In *Braat* the common assignee could not have filed both sets of claims together because the inventive entity named in the application did not invent the subject matter of all the patent claims and vice-versa. ⁴ See *Braat*, 937 F.2d at 594, 19 USPQ2d at 1293. In addition, in *Braat* the "patent invention . . . [was] totally separate from that of [the application], and could conceivably have been developed earlier rather than later." *Id.* at 593, 19 USPQ2d at 1292. The court in *Braat*, however, emphasized the more typical scenario in which, despite common inventive entities, the two-way test applied: "when a *later-filed improvement* patent issues before an *earlier filed basic* invention." *Id.* (emphasis added); accord *Borah*, 345 F.2d at 1009, 148 USPQ at 214 (allowing the earlier filed but later allowed basic patent application to issue without a terminal disclaimer because the two applications could not have been filed as

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one since the improvements were not made until after the application on the basic invention was filed); see also *Calvert*, 97 F.2d at 640, 38 USPQ at 185 (allowing an earlier filed patent application for generic invention to issue without a terminal disclaimer after a later filed improvement patent).

Furthermore, in the present case, unlike *Braat*, the specifications of the Berg application and of the '916 patent are identical; the two disclosures are almost exactly alike. The invention described in claim 1 of the '916 patent, therefore, is anything but "totally separate" from that of the Berg application. In fact, the preferred embodiment of practicing the invention disclosed in the written description of both the application and the '916 patent is claimed in claim 1 of the '916 patent. In addition, both the '916 patent and the application list the same inventive entity, i.e., the same four inventors. Thus all of the excuses accepted by the court in *Braat* are absent here. Finally, unlike *Borah*, the inventions disclosed in both sets of claims had been completed before either application was filed.

[2] For its own reasons, Berg chose to file two applications even though conventional practice presumably would have counseled filing one application. We hold, therefore, that if an applicant can file all of its claims in one application, 5 but elects not to, it is not entitled to the exception of the two-way test. 6

B. *Berg's Prosecution Facts Are Close to Those in Goodman*

Contrary to Berg's assertions, the facts of the present case are close to those in *Goodman*, a case in which we applied the standard one-way test. In *Goodman*, the applicant filed both species and genus claims in the same application. The examiner allowed the species claims but rejected the genus claims. Rather than appealing the rejection of the genus claims, the applicant permitted the species claims to issue upon allowance and continued to prosecute the genus claims in a continuation application. The genus claims were subsequently rejected for obviousness-type double patenting in light of the now issued species claims. Rather than file a terminal disclaimer, the applicant appealed to the Board and then to this court. See *Goodman*, 11 F.3d at 1049, 29 USPQ2d at 2013. This court held that "[a]lthough application claims 12 and 13 form the genus containing the species of patent claim 3, PTO actions did not *dictate the rate of prosecution*. Rather, appellant chose to file a continuation and seek early issuance of the narrow species claims." *Id.* at 1053, 29 USPQ2d at 2016 (emphasis added).

Berg asserts that by filing two separate applications simultaneously, it did not dictate the rates of prosecution but left the control thereof to the PTO; therefore, its case differs from *Goodman*, and it should not be required to file a terminal disclaimer in order for its application to be allowed. Indeed, Berg contends that it chose to file two separate applications precisely to avoid what it considered the harsh result in *Goodman*: the claims which required further prosecution were subsequently rejected for obviousness-type double patenting in view of the issued claims.

[3] However, simultaneously filing two separate applications 7 that could have been filed as one application disqualifies Berg from the two-way test. 8 Rather, Berg should be viewed as having taken a calculated risk that, by simultaneously filing two separate applications, it might gain the advantage of a quickly issued, narrow patent and also the advantage of a broader application which took longer to issue as a patent but consequently

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had a later expiration date. 9 Effectively extending the patent term, however, is precisely the result that the doctrine of obviousness-type double patenting was created to prevent. See *Goodman*, 11 F.3d at 1051, 29 USPQ2d at 2015.

[4] Here, the examiner and the Board were correct in applying the one-way test. The two-way exception can only apply when the applicant could not avoid separate filings, and even then, only if the PTO controlled the rates of prosecution to cause the later filed species claims to issue before the claims for a genus in an earlier application. This was the situation in *Borah*. In Berg's case, the two applications could have been filed as one, so it is irrelevant to our disposition who actually controlled the respective rates of prosecution. Because Berg could have filed one application, Berg's case is controlled by factual analogy to and in principle by *Goodman*

C. *The Options Available to Berg Were Reasonable*

Berg argues that such an outcome is unfair as the applicant is forced to choose between unattractive alternatives. Such an applicant, however, has several options, none of which is unreasonable. If a potential applicant is unsure whether it has more than one patentably distinct set of claims, the PTO advises that it file all of the claims as one application. ¹⁰ Then, as examination proceeds, if the PTO determines that more than one distinct invention was claimed in a single application, 35 U.S.C. Section 121 authorizes the Commissioner to restrict the claims in the application to a single invention. ¹¹ See Manual of Patent Examining Procedure, 6th ed., rev. 1, Section 806 ("MPEP") (where inventions are independent, restriction to one thereof is ordinarily proper; where inventions are related as disclosed but are distinct as claimed, restriction may be proper). If the claims are so restricted, one or more divisional applications can then be filed containing the claims that were the subject of restriction. When such a divisional application is filed, the PTO is prohibited from using the claims of the patent issuing on the application that prompted the restriction requirement as a reference against the claims of any divisional application. See 35 U.S.C. Section 121; see also MPEP Section 804.01. Hence, by filing all of its related claims in one application, such an applicant is protected from an obviousness-type double patenting rejection if the PTO later determines the applicant has submitted claims to more than one patentable invention.

Berg, however, maintains that had it filed one application containing both the genus and species claims as the PTO suggests, it still might have been subjected to an obviousness-type double patenting rejection, like the *Goodman* applicants. Specifically, Berg asserts that if the examiner had *failed* to make a restriction requirement pursuant to 35 U.S.C. Section 121 (presumably because the claims did not disclose two or more patentably distinct inventions), but had allowed the species claims and rejected the genus claims, Berg would have faced the unattractive alternatives of either appealing the rejection of the genus claims, meanwhile delaying the issuance of the species claims, or allowing

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the species claims to issue and pursuing the genus claims in a continuation application. ¹²

Under the first alternative, considering the time for appeal to the Board and then potentially to this court, presumably it could be several years before any of the applicant's claims issued. According to Berg, however, the second alternative has serious drawbacks as well. Under the second alternative, should the species claims issue prior to conclusion of examination of the genus claims, once again the species claims would be used in an obviousness-type double patenting rejection of the genus claims, and the genus claims would thus be subject to a terminal disclaimer requirement as a condition of issuance. See *Goodman*, 11 F.3d at 1053, ²⁹ USPQ2d at 2016. Berg fails to note, however, that "the use of a terminal disclaimer in overcoming a nonstatutory double patenting rejection is in the public interest because it encourages the disclosure of additional developments, the earlier filing of applications, and the earlier expiration of patents whereby the inventions covered become freely available to the public." MPEP Section 804.02.

Furthermore, the problem with an obviousness-type double patenting rejection under the second alternative is the resultant terminal disclaimer. Its duration, however, could be diminished by promptly filing and prosecuting the continuation application containing the genus claims once notice of allowance on the species claims is entered. ¹³ In such a situation, presumably the durational effect of any terminal disclaimer would be minimized. The choice is the applicant's and thus is not unfair.

If an applicant could have filed both sets of claims in a single application because the disclosure of the first application supports the second set of claims, then pursuant to this case and *Goodman*, the one-way test is appropriate to determine if a rejection for obviousness-type double patenting should be sustained.

If, on the other hand, an applicant could not have filed both sets of claims in one application -- for example, because the second application claimed an invention that was not adequately disclosed in the first application -- but the first application was delayed in prosecution causing the second application to issue as a patent first, then one would expect that the "control test" as discussed in *Borah* would be applied to determine whether the applicant or the PTO is responsible for the delay. Under this scenario, the one-way test is appropriate to determine whether a rejection for obviousness-type double patenting will be sustained if the applicant is found responsible for the delay in prosecution of the first-filed application. The two-way test may be appropriate, however, in the unusual circumstance that the PTO is solely responsible for the delay in causing the second-filed application to issue prior to the first.

[5] Each of the options for an applicant filing both genus and species claims has distinct advantages and disadvantages. In the present case, Berg deliberately chose to file simultaneously two applications containing almost identical disclosures, with each disclosure supporting both sets of claims. Berg therefore took the risk that it would be required terminally to disclaim. It filed so knowing the law and the likely outcome. The options are neither unfair, nor inconsistent with settled law, and Berg must accept the foreseeable legal consequences of its choice. To embrace Berg's argument would substantially relax the standards of the obviousness-type double patenting doctrine in all cases of simultaneous filing. This we decline to do.

CONCLUSION

Because of Berg's refusal to submit a terminal disclaimer, all of the genus claims in the Berg application are unpatentable over the species claims of Berg's '916 patent under the doctrine of obviousness-type double patenting because the one-way test applies here as both genus and species claims could have been filed in a single application. For the above reason, the decision of the Board is

AFFIRMED .

Footnotes

Footnote 1. Both the Board and Berg treat claim 1 of the '916 patent and claim 1 of the application as representative of the other pending claims, and we do as well.

Footnote 2. Both claim 1 from the application and from the '916 patent are reproduced below. (application omitted)

Footnote 3. Furthermore, argues Berg, it took over four years from the date the application was filed until the Board rendered its decision affirming the examiner's rejection. If Berg now were to file a terminal disclaimer, it would forfeit from the term of its patent those four years in addition to the time it takes for this appeal to be decided.

Footnote 4. Both applications were filed before the 1984 Act took effect. Prior to the 1984 Act, inventors could not apply jointly unless each made an inventive contribution to the subject matter of every claim. Under the 1984 Act, 35 U.S.C. Section 116 was amended so that "[i]nventors may apply for a patent jointly even though . . . each did not make a contribution to the subject matter of every claim."

Footnote 5. For example, an applicant could have filed all of its claims in one application when the disclosure of the earlier filed application will support the claims in the later filed application.

Footnote 6. Furthermore, even in a case where the inventions could not have been filed in a single application, if the applicant thereafter controlled the respective rates of prosecution to cause the species or improvement claims to issue prior to the genus or basic invention claims as could have been done by, e.g., filing the genus claims long after the species claims even though the two were invented at nearly the same time or the genus claims were invented first, or by filing numerous continuations in the genus application while failing to respond substantively to PTO Office actions, such applicant seems not to be entitled to the two-way test under settled case law. See, e.g., *Emert*, 124 F.3d at 1461, 44 USPQ2d at 1152.

Footnote 7. Although almost identical, Berg's applications are not related as by continuation, continuation-in-part, or divisional, and neither references the other. Berg's actions in filing each of these two applications without informing the PTO of the existence of the other is misleading to the examiner because Berg's actions imply that each application is independent and patentably distinct.

Footnote 8. Allowing what Berg suggests might encourage practitioners to file simultaneously multiple applications with identical disclosures when only one was needed and would burden the PTO with the responsibility of cross-referencing all of the related applications in order to determine if a terminal disclaimer was required.

Footnote 9. As the two applications were filed prior to June 8, 1995, Berg will be entitled to a patent term of the longer of 17 years from the date of issue or 20 years from the date of filing of the '916 patent and on any patent that should issue from the application. Under the current rules, however, an applicant in the scenario like Berg's would be entitled only to 20 years from the date of filing for any patent that issued from applications filed after June 8, 1995. Hence, under the current rules, the length of time an application remains in prosecution simply diminishes the effective length of the patent term accordingly.

Footnote 10. When two sets of claims filed in the same application are patentably distinct or represent independent inventions, the examiner is to issue a restriction requirement. See Manual of Patent Examining Procedure, 6th ed., rev. 1, Sections 803, 806.

Footnote 11. 35 U.S.C. Section 121 states in relevant part:

If two or more independent and distinct inventions are claimed in one application, the Commissioner may require the application to be restricted to one of the inventions. If the other invention is made the subject of a divisional application which complies with the requirements of section 120 of this title it shall be entitled to the benefit of the filing date of the original application. A patent issuing on an application with respect to which a requirement for restriction under this section has been made, or on an application filed as a result of such a requirement, shall not be used as a reference either in the Patent and Trademark Office or in the courts against a divisional application or against the original application or any patent issued on either of them, if the divisional application is filed before the issuance of the patent on the other application.

U.S.C. Section 121 (1994).

Footnote 12. The first alternative is similar to what Berg did in this case, except here, Berg received the benefit of issuance of the species claims while it appealed the rejection of the separate application with the genus claims.

Footnote 13. Under the current rules, because the term of the patent is 20 years from the date of filing, applicants have every incentive to try to complete prosecution of their applications as quickly as possible to minimize elapsed time from filing.

- End of Case -